



Certifications

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Analytical and Quality Control Report

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Report Date: August 8, 2016

Work Order: 16080416



Project Location: Lea County, NM
Project Name: EPNG Line 3031 Spike Test
Project Number: AFE 403828

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
425808	Rupture #4 Release A	water	2016-08-02	10:45	2016-08-04
425809	Rupture #4 Release B, C, & D	water	2016-08-02	10:45	2016-08-04
425810	Rupture #4 Release E, F, G	water	2016-08-02	10:45	2016-08-04
425811	Rupture #4 Release H, I, J	water	2016-08-02	10:45	2016-08-04

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

This report consists of a total of 27 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style with a prominent horizontal line underneath the name.

Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Johnny Grindstaff, Operations Manager

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Case Narrative

Samples for project EPNG Line 3031 Spike Test were received by TraceAnalysis, Inc. on 2016-08-04 and assigned to work order 16080416. Samples for work order 16080416 were received intact at a temperature of 2.4 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (IC)	E 300.0	111794	2016-08-04 at 12:00	131911	2016-08-04 at 13:00
TPH DRO	S 8015 D	111789	2016-08-04 at 14:00	131920	2016-08-05 at 09:44
TPH GRO	S 8015 D	111820	2016-08-05 at 16:42	131953	2016-08-05 at 16:42
Volatiles	S 8260 C	111804	2016-08-04 at 12:00	131931	2016-08-04 at 12:00

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 16080416 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

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Analytical Report

Sample: 425808 - Rupture #4 Release A

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-08-04	Analyzed By:	RL
QC Batch:	131911	Sample Preparation:	2016-08-04	Prepared By:	RL
Prep Batch:	111794				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,3,4	93.2	mg/L	5	2.50

Sample: 425809 - Rupture #4 Release B, C, & D

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-08-05	Analyzed By:	HJ
QC Batch:	131920	Sample Preparation:	2016-08-04	Prepared By:	HJ
Prep Batch:	111789				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3	<5.00	mg/L	1	5.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			2.60	mg/L	1	2.50	104	70 - 130

Sample: 425810 - Rupture #4 Release E, F, G

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5030B
Analysis:	TPH GRO	Date Analyzed:	2016-08-05	Analyzed By:	MT
QC Batch:	131953	Sample Preparation:	2016-08-05	Prepared By:	MT
Prep Batch:	111820				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	B	1,2,3	3.03	mg/L	10	0.200

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.21	mg/L	10	1.00	121	72.8 - 136
4-Bromofluorobenzene (4-BFB)			1.16	mg/L	10	1.00	116	73.3 - 120

Sample: 425811 - Rupture #4 Release H, I, J

Laboratory: Lubbock
Analysis: Volatiles
QC Batch: 131931
Prep Batch: 111804

Analytical Method: S 8260 C
Date Analyzed: 2016-08-04
Sample Preparation: 2016-08-04

Prep Method: S 5030B
Analyzed By: KB
Prepared By: KB

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Bromochloromethane	U	1,2,3,4	<1.00	µg/L	1	1.00
Dichlorodifluoromethane	U	1,2,3,4	<1.00	µg/L	1	1.00
Chloromethane (methyl chloride)	U	1,2,3,4	<1.00	µg/L	1	1.00
Vinyl Chloride	U	1,2,3,4	<1.00	µg/L	1	1.00
Bromomethane (methyl bromide)	U	1,2,3,4	<5.00	µg/L	1	5.00
Chloroethane	U	1,2,3,4	<1.00	µg/L	1	1.00
Trichlorofluoromethane	U	1,2,3,4	<1.00	µg/L	1	1.00
Acetone	Qr,Qs	1,2,3,4	50.2	µg/L	1	10.0
Iodomethane (methyl iodide)	U	1,2,3,4	<5.00	µg/L	1	5.00
Carbon Disulfide		1,2,3,4	9.76	µg/L	1	1.00
Acrylonitrile	U	1,2,3,4	<1.00	µg/L	1	1.00
2-Butanone (MEK)	Qr	1,2,3,4	10.6	µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)	U	1,2,3,4	<5.00	µg/L	1	5.00
2-Hexanone	U	1,2,3,4	<5.00	µg/L	1	5.00
trans 1,4-Dichloro-2-butene	Qc,Qs,U	1,2,3,4	<10.0	µg/L	1	10.0
1,1-Dichloroethene	U	1,2,3,4	<1.00	µg/L	1	1.00
Methylene chloride	U	1,2,3,4	<5.00	µg/L	1	5.00
MTBE	U	1,2,3,4	<1.00	µg/L	1	1.00
trans-1,2-Dichloroethene	U	1,2,3,4	<1.00	µg/L	1	1.00
1,1-Dichloroethane	U	1,2,3,4	<1.00	µg/L	1	1.00
cis-1,2-Dichloroethene	U	1,2,3,4	<1.00	µg/L	1	1.00
2,2-Dichloropropane	U	1,2,3,4	<1.00	µg/L	1	1.00
1,2-Dichloroethane (EDC)	U	1,2,3,4	<1.00	µg/L	1	1.00
Chloroform	U	1,2,3,4	<1.00	µg/L	1	1.00
1,1,1-Trichloroethane	U	1,2,3,4	<1.00	µg/L	1	1.00
1,1-Dichloropropene	U	1,2,3,4	<1.00	µg/L	1	1.00
Benzene		1,2,3,4	22.2	µg/L	1	1.00
Carbon Tetrachloride	U	1,2,3,4	<1.00	µg/L	1	1.00
1,2-Dichloropropane	U	1,2,3,4	<1.00	µg/L	1	1.00
Trichloroethene (TCE)	U	1,2,3,4	<1.00	µg/L	1	1.00

continued ...

sample 425811 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Dibromomethane (methylene bromide)	U	1,2,3,4	<1.00	µg/L	1	1.00
Bromodichloromethane	U	1,2,3,4	<1.00	µg/L	1	1.00
2-Chloroethyl vinyl ether	Q _r ,U	1,2,3,4	<5.00	µg/L	1	5.00
cis-1,3-Dichloropropene	U	1,2,3,4	<1.00	µg/L	1	1.00
trans-1,3-Dichloropropene	U	1,2,3,4	<1.00	µg/L	1	1.00
Toluene		1,2,3,4	4.18	µg/L	1	1.00
1,1,2-Trichloroethane	U	1,2,3,4	<1.00	µg/L	1	1.00
1,3-Dichloropropane	U	1,2,3,4	<1.00	µg/L	1	1.00
Dibromochloromethane	U	1,3,4	<1.00	µg/L	1	1.00
1,2-Dibromoethane (EDB)	U	1,2,3,4	<1.00	µg/L	1	1.00
Tetrachloroethene (PCE)		1,2,3,4	<1.00	µg/L	1	1.00
Chlorobenzene	U	1,2,3,4	<1.00	µg/L	1	1.00
1,1,1,2-Tetrachloroethane	U	1,2,3,4	<1.00	µg/L	1	1.00
Ethylbenzene	U	1,2,3,4	<1.00	µg/L	1	1.00
m,p-Xylene		1,2,3,4	<1.00	µg/L	1	1.00
Bromoform	U	1,2,3,4	<1.00	µg/L	1	1.00
Styrene	U	1,2,3,4	<1.00	µg/L	1	1.00
o-Xylene		1,2,3,4	<1.00	µg/L	1	1.00
1,1,2,2-Tetrachloroethane	U	1,2,3,4	<1.00	µg/L	1	1.00
2-Chlorotoluene	U	1,2,3,4	<1.00	µg/L	1	1.00
1,2,3-Trichloropropane	U	1,2,3,4	<1.00	µg/L	1	1.00
Isopropylbenzene	U	1,2,3,4	<1.00	µg/L	1	1.00
Bromobenzene	U	1,2,3,4	<1.00	µg/L	1	1.00
n-Propylbenzene	U	1,2,3,4	<1.00	µg/L	1	1.00
1,3,5-Trimethylbenzene	U	1,2,3,4	<1.00	µg/L	1	1.00
tert-Butylbenzene	U	1,2,3,4	<1.00	µg/L	1	1.00
1,2,4-Trimethylbenzene	U	1,2,3,4	<1.00	µg/L	1	1.00
1,4-Dichlorobenzene (para)	U	1,2,3,4	<1.00	µg/L	1	1.00
sec-Butylbenzene	U	1,2,3,4	<1.00	µg/L	1	1.00
1,3-Dichlorobenzene (meta)	U	1,2,3,4	<1.00	µg/L	1	1.00
p-Isopropyltoluene		1,2,3	<1.00	µg/L	1	1.00
4-Chlorotoluene	U	1,2,3,4	<1.00	µg/L	1	1.00
1,2-Dichlorobenzene (ortho)	U	1,2,3,4	<1.00	µg/L	1	1.00
n-Butylbenzene		1,2,3,4	<1.00	µg/L	1	1.00
1,2-Dibromo-3-chloropropane	U	1,3	<5.00	µg/L	1	5.00
1,2,3-Trichlorobenzene	U	1,2,3,4	<5.00	µg/L	1	5.00
1,2,4-Trichlorobenzene	U	1,2,3,4	<5.00	µg/L	1	5.00
Naphthalene	U	1,2,3,4	<5.00	µg/L	1	5.00
Hexachlorobutadiene	Q _s ,U	1,2,3,4	<5.00	µg/L	1	5.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane			54.5	µg/L	1	50.0	109	70 - 130

continued ...

sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Toluene-d8			49.0	µg/L	1	50.0	98	70 - 130
4-Bromofluorobenzene (4-BFB)			49.4	µg/L	1	50.0	99	70 - 130

Method Blanks

Method Blank (1) QC Batch: 131911

QC Batch: 131911 Date Analyzed: 2016-08-04 Analyzed By: RL
Prep Batch: 111794 QC Preparation: 2016-08-04 Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1,2,3,4	<0.297	mg/L	2.5

Method Blank (1) QC Batch: 131920

QC Batch: 131920 Date Analyzed: 2016-08-05 Analyzed By: HJ
Prep Batch: 111789 QC Preparation: 2016-08-04 Prepared By: HJ

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1,2,3	<0.890	mg/L	5

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			2.42	mg/L	1	2.50	97	70 - 130

Method Blank (1) QC Batch: 131931

QC Batch: 131931 Date Analyzed: 2016-08-04 Analyzed By: KB
Prep Batch: 111804 QC Preparation: 2016-08-04 Prepared By: KB

Parameter	Flag	Cert	MDL Result	Units	RL
Bromochloromethane		1,2,3,4	<0.330	µg/L	1
Dichlorodifluoromethane		1,2,3,4	<0.350	µg/L	1
Chloromethane (methyl chloride)		1,2,3,4	<0.330	µg/L	1
Vinyl Chloride		1,2,3,4	<0.410	µg/L	1
Bromomethane (methyl bromide)		1,2,3,4	<1.69	µg/L	5
Chloroethane		1,2,3,4	<0.420	µg/L	1
Trichlorofluoromethane		1,2,3,4	<0.410	µg/L	1
Acetone		1,2,3,4	<1.09	µg/L	10

continued ...

method blank continued . . .

Parameter	Flag	Cert	MDL Result	Units	RL
Iodomethane (methyl iodide)		1,2,3,4	<2.47	µg/L	5
Carbon Disulfide		1,2,3,4	<0.400	µg/L	1
Acrylonitrile		1,2,3,4	<0.360	µg/L	1
2-Butanone (MEK)		1,2,3,4	<1.67	µg/L	5
4-Methyl-2-pentanone (MIBK)		1,2,3,4	<2.14	µg/L	5
2-Hexanone		1,2,3,4	<1.49	µg/L	5
trans 1,4-Dichloro-2-butene		1,2,3,4	<1.75	µg/L	10
1,1-Dichloroethene		1,2,3,4	<0.330	µg/L	1
Methylene chloride		1,2,3,4	<2.04	µg/L	5
MTBE		1,2,3,4	<0.320	µg/L	1
trans-1,2-Dichloroethene		1,2,3,4	<0.360	µg/L	1
1,1-Dichloroethane		1,2,3,4	<0.330	µg/L	1
cis-1,2-Dichloroethene		1,2,3,4	<0.330	µg/L	1
2,2-Dichloropropane		1,2,3,4	<0.380	µg/L	1
1,2-Dichloroethane (EDC)		1,2,3,4	<0.280	µg/L	1
Chloroform		1,2,3,4	<0.390	µg/L	1
1,1,1-Trichloroethane		1,2,3,4	<0.370	µg/L	1
1,1-Dichloropropene		1,2,3,4	<0.320	µg/L	1
Benzene		1,2,3,4	<0.340	µg/L	1
Carbon Tetrachloride		1,2,3,4	<0.350	µg/L	1
1,2-Dichloropropane		1,2,3,4	<0.270	µg/L	1
Trichloroethene (TCE)		1,2,3,4	<0.310	µg/L	1
Dibromomethane (methylene bromide)		1,2,3,4	<0.230	µg/L	1
Bromodichloromethane		1,2,3,4	<0.320	µg/L	1
2-Chloroethyl vinyl ether		1,2,3,4	<0.480	µg/L	5
cis-1,3-Dichloropropene		1,2,3,4	<0.210	µg/L	1
trans-1,3-Dichloropropene		1,2,3,4	<0.310	µg/L	1
Toluene		1,2,3,4	<0.350	µg/L	1
1,1,2-Trichloroethane		1,2,3,4	<0.390	µg/L	1
1,3-Dichloropropane		1,2,3,4	<0.310	µg/L	1
Dibromochloromethane		1,3,4	<0.370	µg/L	1
1,2-Dibromoethane (EDB)		1,2,3,4	<0.310	µg/L	1
Tetrachloroethene (PCE)		1,2,3,4	<0.190	µg/L	1
Chlorobenzene		1,2,3,4	<0.290	µg/L	1
1,1,1,2-Tetrachloroethane		1,2,3,4	<0.300	µg/L	1
Ethylbenzene		1,2,3,4	<0.260	µg/L	1
m,p-Xylene		1,2,3,4	<0.480	µg/L	1
Bromoform		1,2,3,4	<0.480	µg/L	1
Styrene		1,2,3,4	<0.250	µg/L	1
o-Xylene		1,2,3,4	<0.260	µg/L	1
1,1,2,2-Tetrachloroethane		1,2,3,4	<0.560	µg/L	1
2-Chlorotoluene		1,2,3,4	<0.250	µg/L	1
1,2,3-Trichloropropane		1,2,3,4	<0.450	µg/L	1
Isopropylbenzene		1,2,3,4	<0.260	µg/L	1

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Parameter	Flag	Cert	MDL Result	Units	RL
Bromobenzene		1,2,3,4	<0.280	µg/L	1
n-Propylbenzene		1,2,3,4	<0.240	µg/L	1
1,3,5-Trimethylbenzene		1,2,3,4	<0.260	µg/L	1
tert-Butylbenzene		1,2,3,4	<0.270	µg/L	1
1,2,4-Trimethylbenzene		1,2,3,4	<0.270	µg/L	1
1,4-Dichlorobenzene (para)		1,2,3,4	<0.310	µg/L	1
sec-Butylbenzene		1,2,3,4	<0.200	µg/L	1
1,3-Dichlorobenzene (meta)		1,2,3,4	<0.280	µg/L	1
p-Isopropyltoluene		1,2,3	<0.200	µg/L	1
4-Chlorotoluene		1,2,3,4	<0.290	µg/L	1
1,2-Dichlorobenzene (ortho)		1,2,3,4	<0.250	µg/L	1
n-Butylbenzene		1,2,3,4	<0.170	µg/L	1
1,2-Dibromo-3-chloropropane		1,3	<1.70	µg/L	5
1,2,3-Trichlorobenzene		1,2,3,4	<0.400	µg/L	5
1,2,4-Trichlorobenzene		1,2,3,4	<2.12	µg/L	5
Naphthalene		1,2,3,4	<2.23	µg/L	5
Hexachlorobutadiene		1,2,3,4	<0.760	µg/L	5

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane			50.8	µg/L	1	50.0	102	70 - 130
Toluene-d8			49.5	µg/L	1	50.0	99	70 - 130
4-Bromofluorobenzene (4-BFB)			50.4	µg/L	1	50.0	101	70 - 130

Method Blank (1) QC Batch: 131953

QC Batch: 131953
Prep Batch: 111820

Date Analyzed: 2016-08-05
QC Preparation: 2016-08-05

Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO	B	B	0.0376	mg/L	0.2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.118	mg/L	1	0.100	118	72.8 - 136
4-Bromofluorobenzene (4-BFB)			0.100	mg/L	1	0.100	100	73.3 - 120

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 131911
Prep Batch: 111794

Date Analyzed: 2016-08-04
QC Preparation: 2016-08-04

Analyzed By: RL
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,3,4	24.5	mg/L	1	25.0	<0.297	98	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,3,4	24.1	mg/L	1	25.0	<0.297	96	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 131920
Prep Batch: 111789

Date Analyzed: 2016-08-05
QC Preparation: 2016-08-04

Analyzed By: HJ
Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3	49.0	mg/L	1	50.0	<0.890	98	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3	45.5	mg/L	1	50.0	<0.890	91	70 - 130	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	2.79	2.74	mg/L	1	2.50	112	110	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 131931
Prep Batch: 111804

Date Analyzed: 2016-08-04
QC Preparation: 2016-08-04

Analyzed By: KB
Prepared By: KB

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromochloromethane		1,2,3,4	50.9	µg/L	1	50.0	<0.330	102	74.4 - 128
Dichlorodifluoromethane		1,2,3,4	47.5	µg/L	1	50.0	<0.350	95	46.8 - 148
Chloromethane (methyl chloride)		1,2,3,4	44.4	µg/L	1	50.0	<0.330	89	63.8 - 125
Vinyl Chloride		1,2,3,4	52.8	µg/L	1	50.0	<0.410	106	60.3 - 129
Bromomethane (methyl bromide)		1,2,3,4	45.9	µg/L	1	50.0	<1.69	92	49.7 - 141
Chloroethane		1,2,3,4	48.2	µg/L	1	50.0	<0.420	96	62.4 - 131
Trichlorofluoromethane		1,2,3,4	50.1	µg/L	1	50.0	<0.410	100	53.5 - 152
Acetone		1,2,3,4	38.4	µg/L	1	50.0	<1.09	77	20 - 190
Iodomethane (methyl iodide)		1,2,3,4	51.2	µg/L	1	50.0	<2.47	102	67.8 - 135
Carbon Disulfide		1,2,3,4	50.8	µg/L	1	50.0	<0.400	102	68.9 - 136
Acrylonitrile		1,2,3,4	40.8	µg/L	1	50.0	<0.360	82	67.6 - 131
2-Butanone (MEK)		1,2,3,4	41.1	µg/L	1	50.0	<1.67	82	45 - 137
4-Methyl-2-pentanone (MIBK)		1,2,3,4	44.8	µg/L	1	50.0	<2.14	90	61.4 - 142
2-Hexanone		1,2,3,4	42.6	µg/L	1	50.0	<1.49	85	51.7 - 145
trans 1,4-Dichloro-2-butene	Qs	Qs	80.3	µg/L	1	50.0	<1.75	161	44.3 - 137
1,1-Dichloroethene		1,2,3,4	51.4	µg/L	1	50.0	<0.330	103	70.6 - 132
Methylene chloride		1,2,3,4	48.5	µg/L	1	50.0	<2.04	97	66.5 - 135
MTBE		1,2,3,4	49.3	µg/L	1	50.0	<0.320	99	72.1 - 130
trans-1,2-Dichloroethene		1,2,3,4	51.4	µg/L	1	50.0	<0.360	103	75.5 - 127
1,1-Dichloroethane		1,2,3,4	49.1	µg/L	1	50.0	<0.330	98	73.7 - 129
cis-1,2-Dichloroethene		1,2,3,4	50.9	µg/L	1	50.0	<0.330	102	75.5 - 127
2,2-Dichloropropane		1,2,3,4	61.6	µg/L	1	50.0	<0.380	123	24.3 - 158
1,2-Dichloroethane (EDC)		1,2,3,4	53.1	µg/L	1	50.0	<0.280	106	71 - 134
Chloroform		1,2,3,4	54.2	µg/L	1	50.0	<0.390	108	74 - 131
1,1,1-Trichloroethane		1,2,3,4	56.4	µg/L	1	50.0	<0.370	113	59.2 - 150
1,1-Dichloropropene		1,2,3,4	53.6	µg/L	1	50.0	<0.320	107	77.7 - 128
Benzene		1,2,3,4	50.8	µg/L	1	50.0	<0.340	102	73 - 124
Carbon Tetrachloride		1,2,3,4	55.8	µg/L	1	50.0	<0.350	112	61.2 - 146
1,2-Dichloropropane		1,2,3,4	54.0	µg/L	1	50.0	<0.270	108	78 - 125
Trichloroethene (TCE)		1,2,3,4	49.9	µg/L	1	50.0	<0.310	100	70.9 - 137
Dibromomethane (methylene bromide)		1,2,3,4	50.9	µg/L	1	50.0	<0.230	102	76.2 - 127
Bromodichloromethane		1,2,3,4	54.5	µg/L	1	50.0	<0.320	109	73.6 - 130
2-Chloroethyl vinyl ether		1,2,3,4	56.8	µg/L	1	50.0	<0.480	114	61.1 - 136
cis-1,3-Dichloropropene		1,2,3,4	50.4	µg/L	1	50.0	<0.210	101	79 - 125
trans-1,3-Dichloropropene		1,2,3,4	51.9	µg/L	1	50.0	<0.310	104	77.1 - 128
Toluene		1,2,3,4	51.7	µg/L	1	50.0	<0.350	103	75.4 - 126
1,1,2-Trichloroethane		1,2,3,4	48.5	µg/L	1	50.0	<0.390	97	72.9 - 122
1,3-Dichloropropane		1,2,3,4	49.2	µg/L	1	50.0	<0.310	98	75 - 120
Dibromochloromethane		1,3,4	53.4	µg/L	1	50.0	<0.370	107	64.8 - 128
1,2-Dibromoethane (EDB)		1,2,3,4	47.6	µg/L	1	50.0	<0.310	95	74.6 - 121

continued ...

control spikes continued ...

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Tetrachloroethene (PCE)		1,2,3,4	45.4	µg/L	1	50.0	<0.190	91	28.6 - 177
Chlorobenzene		1,2,3,4	51.4	µg/L	1	50.0	<0.290	103	73.5 - 120
1,1,1,2-Tetrachloroethane		1,2,3,4	53.5	µg/L	1	50.0	<0.300	107	67 - 128
Ethylbenzene		1,2,3,4	51.8	µg/L	1	50.0	<0.260	104	73 - 123
m,p-Xylene		1,2,3,4	107	µg/L	1	100	<0.480	107	71 - 126
Bromoform		1,2,3,4	57.1	µg/L	1	50.0	<0.480	114	55.5 - 131
Styrene		1,2,3,4	50.1	µg/L	1	50.0	<0.250	100	75.7 - 122
o-Xylene		1,2,3,4	53.8	µg/L	1	50.0	<0.260	108	70.2 - 125
1,1,2,2-Tetrachloroethane		1,2,3,4	47.7	µg/L	1	50.0	<0.560	95	61.1 - 133
2-Chlorotoluene		1,2,3,4	50.2	µg/L	1	50.0	<0.250	100	71.8 - 120
1,2,3-Trichloropropane		1,2,3,4	45.8	µg/L	1	50.0	<0.450	92	67.2 - 132
Isopropylbenzene		1,2,3,4	48.7	µg/L	1	50.0	<0.260	97	72.2 - 123
Bromobenzene		1,2,3,4	49.0	µg/L	1	50.0	<0.280	98	66.7 - 121
n-Propylbenzene		1,2,3,4	49.7	µg/L	1	50.0	<0.240	99	72.9 - 121
1,3,5-Trimethylbenzene		1,2,3,4	50.8	µg/L	1	50.0	<0.260	102	68.4 - 126
tert-Butylbenzene		1,2,3,4	49.2	µg/L	1	50.0	<0.270	98	68.7 - 128
1,2,4-Trimethylbenzene		1,2,3,4	51.6	µg/L	1	50.0	<0.270	103	70.4 - 124
1,4-Dichlorobenzene (para)		1,2,3,4	51.1	µg/L	1	50.0	<0.310	102	73.5 - 120
sec-Butylbenzene		1,2,3,4	50.6	µg/L	1	50.0	<0.200	101	69.6 - 128
1,3-Dichlorobenzene (meta)		1,2,3,4	51.6	µg/L	1	50.0	<0.280	103	74.2 - 120
p-Isopropyltoluene		1,2,3	51.5	µg/L	1	50.0	<0.200	103	73.1 - 124
4-Chlorotoluene		1,2,3,4	50.1	µg/L	1	50.0	<0.290	100	72.8 - 120
1,2-Dichlorobenzene (ortho)		1,2,3,4	51.0	µg/L	1	50.0	<0.250	102	65.2 - 126
n-Butylbenzene		1,2,3,4	53.2	µg/L	1	50.0	<0.170	106	70.1 - 127
1,2-Dibromo-3-chloropropane		1,3	47.9	µg/L	1	50.0	<1.70	96	50.5 - 136
1,2,3-Trichlorobenzene		1,2,3,4	59.9	µg/L	1	50.0	<0.400	120	43.3 - 153
1,2,4-Trichlorobenzene		1,2,3,4	57.1	µg/L	1	50.0	<2.12	114	59.6 - 134
Naphthalene		1,2,3,4	57.3	µg/L	1	50.0	<2.23	115	38.5 - 159
Hexachlorobutadiene		1,2,3,4	54.8	µg/L	1	50.0	<0.760	110	35.8 - 175

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Bromochloromethane		1,2,3,4	52.3	µg/L	1	50.0	<0.330	105	74.4 - 128	3	20
Dichlorodifluoromethane		1,2,3,4	44.1	µg/L	1	50.0	<0.350	88	46.8 - 148	7	20
Chloromethane (methyl chloride)		1,2,3,4	44.9	µg/L	1	50.0	<0.330	90	63.8 - 125	1	20
Vinyl Chloride		1,2,3,4	50.2	µg/L	1	50.0	<0.410	100	60.3 - 129	5	20
Bromomethane (methyl bromide)		1,2,3,4	44.6	µg/L	1	50.0	<1.69	89	49.7 - 141	3	20
Chloroethane		1,2,3,4	45.6	µg/L	1	50.0	<0.420	91	62.4 - 131	6	20
Trichlorofluoromethane		1,2,3,4	45.6	µg/L	1	50.0	<0.410	91	53.5 - 152	9	20
Acetone		1,2,3,4	33.9	µg/L	1	50.0	<1.09	68	20 - 190	12	20
Iodomethane (methyl iodide)		1,2,3,4	51.1	µg/L	1	50.0	<2.47	102	67.8 - 135	0	20
Carbon Disulfide		1,2,3,4	49.4	µg/L	1	50.0	<0.400	99	68.9 - 136	3	20
Acrylonitrile		1,2,3,4	45.4	µg/L	1	50.0	<0.360	91	67.6 - 131	11	20

continued ...

control spikes continued ...

Param			LCSD			Spike	Matrix	Rec.		RPD		
	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
2-Butanone (MEK)	Qr	Qr	1,2,3,4	32.7	µg/L	1	50.0	<1.67	65	45 - 137	23	20
4-Methyl-2-pentanone (MIBK)			1,2,3,4	47.3	µg/L	1	50.0	<2.14	95	61.4 - 142	5	20
2-Hexanone			1,2,3,4	38.1	µg/L	1	50.0	<1.49	76	51.7 - 145	11	20
trans 1,4-Dichloro-2-butene	Qs	Qs	1,2,3,4	79.8	µg/L	1	50.0	<1.75	160	44.3 - 137	1	20
1,1-Dichloroethene			1,2,3,4	50.2	µg/L	1	50.0	<0.330	100	70.6 - 132	2	20
Methylene chloride			1,2,3,4	46.8	µg/L	1	50.0	<2.04	94	66.5 - 135	4	20
MTBE			1,2,3,4	47.8	µg/L	1	50.0	<0.320	96	72.1 - 130	3	20
trans-1,2-Dichloroethene			1,2,3,4	51.1	µg/L	1	50.0	<0.360	102	75.5 - 127	1	20
1,1-Dichloroethane			1,2,3,4	47.0	µg/L	1	50.0	<0.330	94	73.7 - 129	4	20
cis-1,2-Dichloroethene			1,2,3,4	49.9	µg/L	1	50.0	<0.330	100	75.5 - 127	2	20
2,2-Dichloropropane			1,2,3,4	54.4	µg/L	1	50.0	<0.380	109	24.3 - 158	12	20
1,2-Dichloroethane (EDC)			1,2,3,4	45.8	µg/L	1	50.0	<0.280	92	71 - 134	15	20
Chloroform			1,2,3,4	48.8	µg/L	1	50.0	<0.390	98	74 - 131	10	20
1,1,1-Trichloroethane			1,2,3,4	49.9	µg/L	1	50.0	<0.370	100	59.2 - 150	12	20
1,1-Dichloropropene			1,2,3,4	49.1	µg/L	1	50.0	<0.320	98	77.7 - 128	9	20
Benzene			1,2,3,4	48.8	µg/L	1	50.0	<0.340	98	73 - 124	4	20
Carbon Tetrachloride			1,2,3,4	49.3	µg/L	1	50.0	<0.350	99	61.2 - 146	12	20
1,2-Dichloropropane			1,2,3,4	49.9	µg/L	1	50.0	<0.270	100	78 - 125	8	20
Trichloroethene (TCE)			1,2,3,4	49.8	µg/L	1	50.0	<0.310	100	70.9 - 137	0	20
Dibromomethane (methylene bromide)			1,2,3,4	47.5	µg/L	1	50.0	<0.230	95	76.2 - 127	7	20
Bromodichloromethane			1,2,3,4	49.8	µg/L	1	50.0	<0.320	100	73.6 - 130	9	20
2-Chloroethyl vinyl ether			1,2,3,4	53.6	µg/L	1	50.0	<0.480	107	61.1 - 136	6	20
cis-1,3-Dichloropropene			1,2,3,4	48.0	µg/L	1	50.0	<0.210	96	79 - 125	5	20
trans-1,3-Dichloropropene			1,2,3,4	47.5	µg/L	1	50.0	<0.310	95	77.1 - 128	9	20
Toluene			1,2,3,4	49.9	µg/L	1	50.0	<0.350	100	75.4 - 126	4	20
1,1,2-Trichloroethane			1,2,3,4	46.5	µg/L	1	50.0	<0.390	93	72.9 - 122	4	20
1,3-Dichloropropane			1,2,3,4	46.5	µg/L	1	50.0	<0.310	93	75 - 120	6	20
Dibromochloromethane			1,3,4	49.7	µg/L	1	50.0	<0.370	99	64.8 - 128	7	20
1,2-Dibromoethane (EDB)			1,2,3,4	46.9	µg/L	1	50.0	<0.310	94	74.6 - 121	2	20
Tetrachloroethene (PCE)			1,2,3,4	45.3	µg/L	1	50.0	<0.190	91	28.6 - 177	0	20
Chlorobenzene			1,2,3,4	50.5	µg/L	1	50.0	<0.290	101	73.5 - 120	2	20
1,1,1,2-Tetrachloroethane			1,2,3,4	51.8	µg/L	1	50.0	<0.300	104	67 - 128	3	20
Ethylbenzene			1,2,3,4	50.8	µg/L	1	50.0	<0.260	102	73 - 123	2	20
m,p-Xylene			1,2,3,4	103	µg/L	1	100	<0.480	103	71 - 126	4	20
Bromoform			1,2,3,4	55.9	µg/L	1	50.0	<0.480	112	55.5 - 131	2	20
Styrene			1,2,3,4	48.9	µg/L	1	50.0	<0.250	98	75.7 - 122	2	20
o-Xylene			1,2,3,4	52.0	µg/L	1	50.0	<0.260	104	70.2 - 125	3	20
1,1,2,2-Tetrachloroethane			1,2,3,4	44.9	µg/L	1	50.0	<0.560	90	61.1 - 133	6	20
2-Chlorotoluene			1,2,3,4	49.8	µg/L	1	50.0	<0.250	100	71.8 - 120	1	20
1,2,3-Trichloropropane			1,2,3,4	48.1	µg/L	1	50.0	<0.450	96	67.2 - 132	5	20
Isopropylbenzene			1,2,3,4	48.7	µg/L	1	50.0	<0.260	97	72.2 - 123	0	20
Bromobenzene			1,2,3,4	48.6	µg/L	1	50.0	<0.280	97	66.7 - 121	1	20
n-Propylbenzene			1,2,3,4	49.5	µg/L	1	50.0	<0.240	99	72.9 - 121	0	20
1,3,5-Trimethylbenzene			1,2,3,4	50.2	µg/L	1	50.0	<0.260	100	68.4 - 126	1	20

continued ...

control spikes continued ...

Param	F	C	LCSD		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
tert-Butylbenzene		1,2,3,4	49.6	µg/L	1	50.0	<0.270	99	68.7 - 128	1	20
1,2,4-Trimethylbenzene		1,2,3,4	50.8	µg/L	1	50.0	<0.270	102	70.4 - 124	2	20
1,4-Dichlorobenzene (para)		1,2,3,4	51.2	µg/L	1	50.0	<0.310	102	73.5 - 120	0	20
sec-Butylbenzene		1,2,3,4	49.9	µg/L	1	50.0	<0.200	100	69.6 - 128	1	20
1,3-Dichlorobenzene (meta)		1,2,3,4	50.6	µg/L	1	50.0	<0.280	101	74.2 - 120	2	20
p-Isopropyltoluene		1,2,3	51.1	µg/L	1	50.0	<0.200	102	73.1 - 124	1	20
4-Chlorotoluene		1,2,3,4	48.6	µg/L	1	50.0	<0.290	97	72.8 - 120	3	20
1,2-Dichlorobenzene (ortho)		1,2,3,4	51.1	µg/L	1	50.0	<0.250	102	65.2 - 126	0	20
n-Butylbenzene		1,2,3,4	52.8	µg/L	1	50.0	<0.170	106	70.1 - 127	1	20
1,2-Dibromo-3-chloropropane		1,3	49.8	µg/L	1	50.0	<1.70	100	50.5 - 136	4	20
1,2,3-Trichlorobenzene		1,2,3,4	60.4	µg/L	1	50.0	<0.400	121	43.3 - 153	1	20
1,2,4-Trichlorobenzene		1,2,3,4	57.9	µg/L	1	50.0	<2.12	116	59.6 - 134	1	20
Naphthalene		1,2,3,4	61.1	µg/L	1	50.0	<2.23	122	38.5 - 159	6	20
Hexachlorobutadiene		1,2,3,4	55.4	µg/L	1	50.0	<0.760	111	35.8 - 175	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	51.4	49.5	µg/L	1	50.0	103	99	70 - 130
Toluene-d8	49.2	48.0	µg/L	1	50.0	98	96	70 - 130
4-Bromofluorobenzene (4-BFB)	52.0	50.9	µg/L	1	50.0	104	102	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 131953
Prep Batch: 111820

Date Analyzed: 2016-08-05
QC Preparation: 2016-08-05

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3	1.21	mg/L	1	1.00	0.0376	121	74.6 - 123

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3	1.22	mg/L	1	1.00	0.0376	122	74.6 - 123	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.111	0.111	mg/L	1	0.100	111	111	72.8 - 136
4-Bromofluorobenzene (4-BFB)	0.108	0.110	mg/L	1	0.100	108	110	73.3 - 120

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 425877

QC Batch: 131911
Prep Batch: 111794

Date Analyzed: 2016-08-04
QC Preparation: 2016-08-04

Analyzed By: RL
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,3,4	2890	mg/L	100	2500	449	98	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,3,4	2910	mg/L	100	2500	449	98	80 - 120	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 425809

QC Batch: 131920
Prep Batch: 111789

Date Analyzed: 2016-08-05
QC Preparation: 2016-08-04

Analyzed By: HJ
Prepared By: HJ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3	40.1	mg/L	1	50.0	1.79	77	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3	36.9	mg/L	1	50.0	1.79	70	70 - 130	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	3.27	2.93	mg/L	1	2.5	131	117	70 - 130

Matrix Spike (MS-1) Spiked Sample: 425811

QC Batch: 131931
Prep Batch: 111804

Date Analyzed: 2016-08-04
QC Preparation: 2016-08-04

Analyzed By: KB
Prepared By: KB

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromochloromethane		1,2,3,4	49.4	µg/L	1	50.0	<0.330	99	64.4 - 146
Dichlorodifluoromethane		1,2,3,4	37.0	µg/L	1	50.0	<0.350	74	36.2 - 162
Chloromethane (methyl chloride)		1,2,3,4	37.6	µg/L	1	50.0	<0.330	75	56.1 - 142
Vinyl Chloride		1,2,3,4	40.9	µg/L	1	50.0	<0.410	82	12 - 172
Bromomethane (methyl bromide)		1,2,3,4	37.9	µg/L	1	50.0	<1.69	76	43.6 - 159
Chloroethane		1,2,3,4	39.9	µg/L	1	50.0	<0.420	80	58 - 148
Trichlorofluoromethane		1,2,3,4	41.1	µg/L	1	50.0	<0.410	82	52.2 - 163
Acetone		1,2,3,4	79.3	µg/L	1	50.0	50.2	58	12.8 - 120
Iodomethane (methyl iodide)		1,2,3,4	49.0	µg/L	1	50.0	<2.47	98	10 - 200
Carbon Disulfide		1,2,3,4	56.0	µg/L	1	50.0	9.76	92	57.6 - 149
Acrylonitrile		1,2,3,4	38.3	µg/L	1	50.0	<0.360	77	67.2 - 134
2-Butanone (MEK)		1,2,3,4	47.2	µg/L	1	50.0	10.6	73	31.3 - 124
4-Methyl-2-pentanone (MIBK)		1,2,3,4	47.8	µg/L	1	50.0	<2.14	96	56.5 - 143
2-Hexanone		1,2,3,4	41.4	µg/L	1	50.0	<1.49	83	29 - 144
trans 1,4-Dichloro-2-butene	Qs	Qs	85.8	µg/L	1	50.0	<1.75	172	10 - 143
1,1-Dichloroethene		1,2,3,4	46.3	µg/L	1	50.0	<0.330	93	34.6 - 166
Methylene chloride		1,2,3,4	43.6	µg/L	1	50.0	<2.04	87	64.3 - 140
MTBE		1,2,3,4	46.6	µg/L	1	50.0	<0.320	93	41.6 - 161
trans-1,2-Dichloroethene		1,2,3,4	48.3	µg/L	1	50.0	<0.360	97	63.2 - 146
1,1-Dichloroethane		1,2,3,4	46.2	µg/L	1	50.0	<0.330	92	69.2 - 143
cis-1,2-Dichloroethene		1,2,3,4	47.9	µg/L	1	50.0	<0.330	96	64.8 - 144
2,2-Dichloropropane		1,2,3,4	49.0	µg/L	1	50.0	<0.380	98	21.7 - 152
1,2-Dichloroethane (EDC)		1,2,3,4	44.5	µg/L	1	50.0	<0.280	89	62 - 157
Chloroform		1,2,3,4	47.3	µg/L	1	50.0	<0.390	95	64.9 - 150
1,1,1-Trichloroethane		1,2,3,4	47.2	µg/L	1	50.0	<0.370	94	62.3 - 163
1,1-Dichloropropene		1,2,3,4	46.3	µg/L	1	50.0	<0.320	93	31 - 174
Benzene		1,2,3,4	67.3	µg/L	1	50.0	22.2	90	62 - 139
Carbon Tetrachloride		1,2,3,4	45.1	µg/L	1	50.0	<0.350	90	58 - 164
1,2-Dichloropropane		1,2,3,4	47.1	µg/L	1	50.0	<0.270	94	68.1 - 140
Trichloroethene (TCE)		1,2,3,4	47.0	µg/L	1	50.0	<0.310	94	49.9 - 163
Dibromomethane (methylene bromide)		1,2,3,4	46.0	µg/L	1	50.0	<0.230	92	66.8 - 142
Bromodichloromethane		1,2,3,4	48.1	µg/L	1	50.0	<0.320	96	63.9 - 152
2-Chloroethyl vinyl ether		1,2,3,4	<0.480	µg/L	1	50.0	<0.480	0	0 - 120
cis-1,3-Dichloropropene		1,2,3,4	46.7	µg/L	1	50.0	<0.210	93	32.6 - 160
trans-1,3-Dichloropropene		1,2,3,4	47.2	µg/L	1	50.0	<0.310	94	31.4 - 163
Toluene		1,2,3,4	52.0	µg/L	1	50.0	4.18	96	40.7 - 160
1,1,2-Trichloroethane		1,2,3,4	43.3	µg/L	1	50.0	<0.390	87	66 - 130
1,3-Dichloropropane		1,2,3,4	43.6	µg/L	1	50.0	<0.310	87	66.2 - 131
Dibromochloromethane		1,3,4	48.1	µg/L	1	50.0	<0.370	96	58.8 - 143
1,2-Dibromoethane (EDB)		1,2,3,4	44.2	µg/L	1	50.0	<0.310	88	66.8 - 132

continued ...

matrix spikes continued ...

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Tetrachloroethene (PCE)		1,2,3,4	41.1	µg/L	1	50.0	0.71	81	28.8 - 126
Chlorobenzene		1,2,3,4	47.6	µg/L	1	50.0	<0.290	95	61.6 - 134
1,1,1,2-Tetrachloroethane		1,2,3,4	47.9	µg/L	1	50.0	<0.300	96	63.1 - 139
Ethylbenzene		1,2,3,4	44.2	µg/L	1	50.0	<0.260	88	43 - 148
m,p-Xylene		1,2,3,4	89.5	µg/L	1	100	0.61	89	21.5 - 165
Bromoform		1,2,3,4	54.9	µg/L	1	50.0	<0.480	110	49 - 144
Styrene		1,2,3,4	44.4	µg/L	1	50.0	<0.250	89	10 - 192
o-Xylene		1,2,3,4	45.8	µg/L	1	50.0	0.35	91	28.4 - 160
1,1,2,2-Tetrachloroethane		1,2,3,4	43.4	µg/L	1	50.0	<0.560	87	65.3 - 133
2-Chlorotoluene		1,2,3,4	40.1	µg/L	1	50.0	<0.250	80	56 - 134
1,2,3-Trichloropropane		1,2,3,4	40.1	µg/L	1	50.0	<0.450	80	62.8 - 126
Isopropylbenzene		1,2,3,4	39.5	µg/L	1	50.0	<0.260	79	31.4 - 156
Bromobenzene		1,2,3,4	42.6	µg/L	1	50.0	<0.280	85	57.8 - 128
n-Propylbenzene		1,2,3,4	38.3	µg/L	1	50.0	<0.240	77	30.5 - 154
1,3,5-Trimethylbenzene		1,2,3,4	39.4	µg/L	1	50.0	<0.260	79	10 - 183
tert-Butylbenzene		1,2,3,4	37.3	µg/L	1	50.0	<0.270	75	42.8 - 148
1,2,4-Trimethylbenzene		1,2,3,4	39.6	µg/L	1	50.0	<0.270	79	10 - 179
1,4-Dichlorobenzene (para)		1,2,3,4	44.4	µg/L	1	50.0	<0.310	89	66 - 123
sec-Butylbenzene		1,2,3,4	36.0	µg/L	1	50.0	<0.200	72	30.8 - 155
1,3-Dichlorobenzene (meta)		1,2,3,4	44.7	µg/L	1	50.0	<0.280	89	66 - 124
p-Isopropyltoluene		1,2,3	37.6	µg/L	1	50.0	0.23	75	20.9 - 164
4-Chlorotoluene		1,2,3,4	40.1	µg/L	1	50.0	<0.290	80	54.8 - 136
1,2-Dichlorobenzene (ortho)		1,2,3,4	44.5	µg/L	1	50.0	<0.250	89	65.9 - 124
n-Butylbenzene		1,2,3,4	35.0	µg/L	1	50.0	0.29	69	31.3 - 153
1,2-Dibromo-3-chloropropane		1,3	50.3	µg/L	1	50.0	<1.70	101	49.3 - 138
1,2,3-Trichlorobenzene		1,2,3,4	40.6	µg/L	1	50.0	<0.400	81	37.5 - 146
1,2,4-Trichlorobenzene		1,2,3,4	41.6	µg/L	1	50.0	<2.12	83	55.3 - 132
Naphthalene		1,2,3,4	47.2	µg/L	1	50.0	<2.23	94	10 - 169
Hexachlorobutadiene		1,2,3,4	26.6	µg/L	1	50.0	<0.760	53	47.4 - 146

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Bromochloromethane		1,2,3,4	48.2	µg/L	1	50.0	<0.330	96	64.4 - 146	2	20
Dichlorodifluoromethane		1,2,3,4	31.6	µg/L	1	50.0	<0.350	63	36.2 - 162	16	20
Chloromethane (methyl chloride)		1,2,3,4	38.8	µg/L	1	50.0	<0.330	78	56.1 - 142	3	20
Vinyl Chloride		1,2,3,4	40.3	µg/L	1	50.0	<0.410	81	12 - 172	2	20
Bromomethane (methyl bromide)		1,2,3,4	37.2	µg/L	1	50.0	<1.69	74	43.6 - 159	2	20
Chloroethane		1,2,3,4	37.5	µg/L	1	50.0	<0.420	75	58 - 148	6	20
Trichlorofluoromethane		1,2,3,4	37.6	µg/L	1	50.0	<0.410	75	52.2 - 163	9	20
Acetone	Qr, Qs	Qr, Qs	55.7	µg/L	1	50.0	50.2	11	12.8 - 120	35	20
Iodomethane (methyl iodide)		1,2,3,4	46.6	µg/L	1	50.0	<2.47	93	10 - 200	5	20
Carbon Disulfide		1,2,3,4	52.1	µg/L	1	50.0	9.76	85	57.6 - 149	7	20
Acrylonitrile		1,2,3,4	43.0	µg/L	1	50.0	<0.360	86	67.2 - 134	12	20

continued ...

matrix spikes continued . . .

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD	RPD Limit
2-Butanone (MEK)		1,2,3,4	44.3	µg/L	1	50.0	10.6	67	31.3 - 124	6	20
4-Methyl-2-pentanone (MIBK)		1,2,3,4	45.2	µg/L	1	50.0	<2.14	90	56.5 - 143	6	20
2-Hexanone		1,2,3,4	44.2	µg/L	1	50.0	<1.49	88	29 - 144	6	20
trans 1,4-Dichloro-2-butene	Qs	Qs	83.9	µg/L	1	50.0	<1.75	168	10 - 143	2	20
1,1-Dichloroethene		1,2,3,4	46.0	µg/L	1	50.0	<0.330	92	34.6 - 166	1	20
Methylene chloride		1,2,3,4	42.8	µg/L	1	50.0	<2.04	86	64.3 - 140	2	20
MTBE		1,2,3,4	45.2	µg/L	1	50.0	<0.320	90	41.6 - 161	3	20
trans-1,2-Dichloroethene		1,2,3,4	46.5	µg/L	1	50.0	<0.360	93	63.2 - 146	4	20
1,1-Dichloroethane		1,2,3,4	44.7	µg/L	1	50.0	<0.330	89	69.2 - 143	3	20
cis-1,2-Dichloroethene		1,2,3,4	45.8	µg/L	1	50.0	<0.330	92	64.8 - 144	4	20
2,2-Dichloropropane		1,2,3,4	46.2	µg/L	1	50.0	<0.380	92	21.7 - 152	6	20
1,2-Dichloroethane (EDC)		1,2,3,4	46.4	µg/L	1	50.0	<0.280	93	62 - 157	4	20
Chloroform		1,2,3,4	45.6	µg/L	1	50.0	<0.390	91	64.9 - 150	4	20
1,1,1-Trichloroethane		1,2,3,4	45.9	µg/L	1	50.0	<0.370	92	62.3 - 163	3	20
1,1-Dichloropropene		1,2,3,4	47.0	µg/L	1	50.0	<0.320	94	31 - 174	2	20
Benzene		1,2,3,4	64.0	µg/L	1	50.0	22.2	84	62 - 139	5	20
Carbon Tetrachloride		1,2,3,4	45.9	µg/L	1	50.0	<0.350	92	58 - 164	2	20
1,2-Dichloropropane		1,2,3,4	50.6	µg/L	1	50.0	<0.270	101	68.1 - 140	7	20
Trichloroethene (TCE)		1,2,3,4	46.6	µg/L	1	50.0	<0.310	93	49.9 - 163	1	20
Dibromomethane (methylene bromide)		1,2,3,4	46.1	µg/L	1	50.0	<0.230	92	66.8 - 142	0	20
Bromodichloromethane		1,2,3,4	49.2	µg/L	1	50.0	<0.320	98	63.9 - 152	2	20
2-Chloroethyl vinyl ether	Qr	Qr	55.7	µg/L	1	50.0	<0.480	111	0 - 120	200	20
cis-1,3-Dichloropropene		1,2,3,4	47.9	µg/L	1	50.0	<0.210	96	32.6 - 160	2	20
trans-1,3-Dichloropropene		1,2,3,4	49.0	µg/L	1	50.0	<0.310	98	31.4 - 163	4	20
Toluene		1,2,3,4	50.8	µg/L	1	50.0	4.18	93	40.7 - 160	2	20
1,1,2-Trichloroethane		1,2,3,4	45.0	µg/L	1	50.0	<0.390	90	66 - 130	4	20
1,3-Dichloropropane		1,2,3,4	46.7	µg/L	1	50.0	<0.310	93	66.2 - 131	7	20
Dibromochloromethane		1,3,4	49.4	µg/L	1	50.0	<0.370	99	58.8 - 143	3	20
1,2-Dibromoethane (EDB)		1,2,3,4	45.2	µg/L	1	50.0	<0.310	90	66.8 - 132	2	20
Tetrachloroethene (PCE)		1,2,3,4	42.2	µg/L	1	50.0	0.71	83	28.8 - 126	3	20
Chlorobenzene		1,2,3,4	47.2	µg/L	1	50.0	<0.290	94	61.6 - 134	1	20
1,1,1,2-Tetrachloroethane		1,2,3,4	48.8	µg/L	1	50.0	<0.300	98	63.1 - 139	2	20
Ethylbenzene		1,2,3,4	45.2	µg/L	1	50.0	<0.260	90	43 - 148	2	20
m,p-Xylene		1,2,3,4	92.3	µg/L	1	100	0.61	92	21.5 - 165	3	20
Bromoform		1,2,3,4	54.0	µg/L	1	50.0	<0.480	108	49 - 144	2	20
Styrene		1,2,3,4	44.7	µg/L	1	50.0	<0.250	89	10 - 192	1	20
o-Xylene		1,2,3,4	45.9	µg/L	1	50.0	0.35	91	28.4 - 160	0	20
1,1,2,2-Tetrachloroethane		1,2,3,4	42.8	µg/L	1	50.0	<0.560	86	65.3 - 133	1	20
2-Chlorotoluene		1,2,3,4	43.5	µg/L	1	50.0	<0.250	87	56 - 134	8	20
1,2,3-Trichloropropane		1,2,3,4	43.4	µg/L	1	50.0	<0.450	87	62.8 - 126	8	20
Isopropylbenzene		1,2,3,4	41.4	µg/L	1	50.0	<0.260	83	31.4 - 156	5	20
Bromobenzene		1,2,3,4	47.8	µg/L	1	50.0	<0.280	96	57.8 - 128	12	20
n-Propylbenzene		1,2,3,4	41.1	µg/L	1	50.0	<0.240	82	30.5 - 154	7	20
1,3,5-Trimethylbenzene		1,2,3,4	41.4	µg/L	1	50.0	<0.260	83	10 - 183	5	20

continued . . .

matrix spikes continued . . .

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
tert-Butylbenzene		1,2,3,4	38.1	µg/L	1	50.0	<0.270	76	42.8 - 148	2	20
1,2,4-Trimethylbenzene		1,2,3,4	42.2	µg/L	1	50.0	<0.270	84	10 - 179	6	20
1,4-Dichlorobenzene (para)		1,2,3,4	45.9	µg/L	1	50.0	<0.310	92	66 - 123	3	20
sec-Butylbenzene		1,2,3,4	36.5	µg/L	1	50.0	<0.200	73	30.8 - 155	1	20
1,3-Dichlorobenzene (meta)		1,2,3,4	45.1	µg/L	1	50.0	<0.280	90	66 - 124	1	20
p-Isopropyltoluene		1,2,3	37.4	µg/L	1	50.0	0.23	74	20.9 - 164	0	20
4-Chlorotoluene		1,2,3,4	43.5	µg/L	1	50.0	<0.290	87	54.8 - 136	8	20
1,2-Dichlorobenzene (ortho)		1,2,3,4	45.1	µg/L	1	50.0	<0.250	90	65.9 - 124	1	20
n-Butylbenzene		1,2,3,4	35.4	µg/L	1	50.0	0.29	70	31.3 - 153	1	20
1,2-Dibromo-3-chloropropane		1,3	50.1	µg/L	1	50.0	<1.70	100	49.3 - 138	0	20
1,2,3-Trichlorobenzene		1,2,3,4	46.4	µg/L	1	50.0	<0.400	93	37.5 - 146	13	20
1,2,4-Trichlorobenzene		1,2,3,4	43.5	µg/L	1	50.0	<2.12	87	55.3 - 132	4	20
Naphthalene		1,2,3,4	51.7	µg/L	1	50.0	<2.23	103	10 - 169	9	20
Hexachlorobutadiene	Qs	Qs	23.2	µg/L	1	50.0	<0.760	46	47.4 - 146	14	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Dibromofluoromethane	49.0	48.2	µg/L	1	50	98	96	70 - 130
Toluene-d8	46.5	48.2	µg/L	1	50	93	96	70 - 130
4-Bromofluorobenzene (4-BFB)	48.6	49.2	µg/L	1	50	97	98	70 - 130

Matrix Spike (MS-1) Spiked Sample: 425810

QC Batch: 131953
Prep Batch: 111820

Date Analyzed: 2016-08-05
QC Preparation: 2016-08-05

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3	13.3	mg/L	10	10.0	3.03	103	57 - 134

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3	12.2	mg/L	10	10.0	3.03	92	57 - 134	9	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.11	1.08	mg/L	10	1	111	108	72.8 - 136
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	1.29	mg/L	10	1	129	73.3 - 120

Calibration Standards

Standard (CCV-1)

QC Batch: 131911

Date Analyzed: 2016-08-04

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,3,4	mg/L	25.0	25.0	100	90 - 110	2016-08-04

Standard (CCV-2)

QC Batch: 131911

Date Analyzed: 2016-08-04

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,3,4	mg/L	25.0	24.6	98	90 - 110	2016-08-04

Standard (CCV-1)

QC Batch: 131920

Date Analyzed: 2016-08-05

Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3	mg/L	500	433	87	80 - 120	2016-08-05

Standard (CCV-2)

QC Batch: 131920

Date Analyzed: 2016-08-05

Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3	mg/L	500	511	102	80 - 120	2016-08-05

Standard (CCV-1)

QC Batch: 131931

Date Analyzed: 2016-08-04

Analyzed By: KB

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromochloromethane		1,2,3,4	µg/L	50.0	50.0	100	80 - 120	2016-08-04
Dichlorodifluoromethane		1,2,3,4	µg/L	50.0	50.1	100	80 - 120	2016-08-04
Chloromethane (methyl chloride)		1,2,3,4	µg/L	50.0	43.7	87	80 - 120	2016-08-04
Vinyl Chloride		1,2,3,4	µg/L	50.0	50.0	100	80 - 120	2016-08-04
Bromomethane (methyl bromide)		1,2,3,4	µg/L	50.0	44.6	89	80 - 120	2016-08-04
Chloroethane		1,2,3,4	µg/L	50.0	46.6	93	80 - 120	2016-08-04
Trichlorofluoromethane		1,2,3,4	µg/L	50.0	51.3	103	80 - 120	2016-08-04
Acetone		1,2,3,4	µg/L	50.0	41.2	82	80 - 120	2016-08-04
Iodomethane (methyl iodide)		1,2,3,4	µg/L	50.0	49.1	98	80 - 120	2016-08-04
Carbon Disulfide		1,2,3,4	µg/L	50.0	48.6	97	80 - 120	2016-08-04
Acrylonitrile		1,2,3,4	µg/L	50.0	43.3	87	80 - 120	2016-08-04
2-Butanone (MEK)		1,2,3,4	µg/L	50.0	44.9	90	80 - 120	2016-08-04
4-Methyl-2-pentanone (MIBK)		1,2,3,4	µg/L	50.0	41.1	82	80 - 120	2016-08-04
2-Hexanone		1,2,3,4	µg/L	50.0	44.3	89	80 - 120	2016-08-04
trans 1,4-Dichloro-2-butene	Qc	Qc	µg/L	50.0	78.4	157	80 - 120	2016-08-04
1,1-Dichloroethene		1,2,3,4	µg/L	50.0	47.8	96	80 - 120	2016-08-04
Methylene chloride		1,2,3,4	µg/L	50.0	46.8	94	80 - 120	2016-08-04
MTBE		1,2,3,4	µg/L	50.0	47.7	95	80 - 120	2016-08-04
trans-1,2-Dichloroethene		1,2,3,4	µg/L	50.0	49.4	99	80 - 120	2016-08-04
1,1-Dichloroethane		1,2,3,4	µg/L	50.0	47.4	95	80 - 120	2016-08-04
cis-1,2-Dichloroethene		1,2,3,4	µg/L	50.0	47.8	96	80 - 120	2016-08-04
2,2-Dichloropropane		1,2,3,4	µg/L	50.0	57.3	115	80 - 120	2016-08-04
1,2-Dichloroethane (EDC)		1,2,3,4	µg/L	50.0	47.4	95	80 - 120	2016-08-04
Chloroform		1,2,3,4	µg/L	50.0	50.5	101	80 - 120	2016-08-04
1,1,1-Trichloroethane		1,2,3,4	µg/L	50.0	50.9	102	80 - 120	2016-08-04
1,1-Dichloropropene		1,2,3,4	µg/L	50.0	49.6	99	80 - 120	2016-08-04
Benzene		1,2,3,4	µg/L	50.0	47.3	95	80 - 120	2016-08-04
Carbon Tetrachloride		1,2,3,4	µg/L	50.0	51.1	102	80 - 120	2016-08-04
1,2-Dichloropropane		1,2,3,4	µg/L	50.0	50.6	101	80 - 120	2016-08-04
Trichloroethene (TCE)		1,2,3,4	µg/L	50.0	46.2	92	80 - 120	2016-08-04
Dibromomethane (methylene bromide)		1,2,3,4	µg/L	50.0	48.1	96	80 - 120	2016-08-04
Bromodichloromethane		1,2,3,4	µg/L	50.0	53.8	108	80 - 120	2016-08-04
2-Chloroethyl vinyl ether		1,2,3,4	µg/L	50.0	57.8	116	80 - 120	2016-08-04
cis-1,3-Dichloropropene		1,2,3,4	µg/L	50.0	48.9	98	80 - 120	2016-08-04
trans-1,3-Dichloropropene		1,2,3,4	µg/L	50.0	50.9	102	80 - 120	2016-08-04
Toluene		1,2,3,4	µg/L	50.0	49.0	98	80 - 120	2016-08-04
1,1,2-Trichloroethane		1,2,3,4	µg/L	50.0	46.6	93	80 - 120	2016-08-04
1,3-Dichloropropane		1,2,3,4	µg/L	50.0	48.4	97	80 - 120	2016-08-04
Dibromochloromethane		1,3,4	µg/L	50.0	51.1	102	80 - 120	2016-08-04
1,2-Dibromoethane (EDB)		1,2,3,4	µg/L	50.0	46.6	93	80 - 120	2016-08-04
Tetrachloroethene (PCE)		1,2,3,4	µg/L	50.0	44.3	89	80 - 120	2016-08-04

continued . . .

Report Date: August 8, 2016
AFE 403828

Work Order: 16080416
EPNG Line 3031 Spike Test

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standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chlorobenzene		1,2,3,4	µg/L	50.0	49.6	99	80 - 120	2016-08-04
1,1,1,2-Tetrachloroethane		1,2,3,4	µg/L	50.0	52.8	106	80 - 120	2016-08-04
Ethylbenzene		1,2,3,4	µg/L	50.0	50.1	100	80 - 120	2016-08-04
m,p-Xylene		1,2,3,4	µg/L	100	103	103	80 - 120	2016-08-04
Bromoform		1,2,3,4	µg/L	50.0	54.4	109	80 - 120	2016-08-04
Styrene		1,2,3,4	µg/L	50.0	48.6	97	80 - 120	2016-08-04
o-Xylene		1,2,3,4	µg/L	50.0	52.5	105	80 - 120	2016-08-04
1,1,2,2-Tetrachloroethane		1,2,3,4	µg/L	50.0	44.7	89	80 - 120	2016-08-04
2-Chlorotoluene		1,2,3,4	µg/L	50.0	48.7	97	80 - 120	2016-08-04
1,2,3-Trichloropropane		1,2,3,4	µg/L	50.0	44.6	89	80 - 120	2016-08-04
Isopropylbenzene		1,2,3,4	µg/L	50.0	46.4	93	80 - 120	2016-08-04
Bromobenzene		1,2,3,4	µg/L	50.0	48.1	96	80 - 120	2016-08-04
n-Propylbenzene		1,2,3,4	µg/L	50.0	47.7	95	80 - 120	2016-08-04
1,3,5-Trimethylbenzene		1,2,3,4	µg/L	50.0	48.4	97	80 - 120	2016-08-04
tert-Butylbenzene		1,2,3,4	µg/L	50.0	47.4	95	80 - 120	2016-08-04
1,2,4-Trimethylbenzene		1,2,3,4	µg/L	50.0	50.0	100	80 - 120	2016-08-04
1,4-Dichlorobenzene (para)		1,2,3,4	µg/L	50.0	49.1	98	80 - 120	2016-08-04
sec-Butylbenzene		1,2,3,4	µg/L	50.0	48.5	97	80 - 120	2016-08-04
1,3-Dichlorobenzene (meta)		1,2,3,4	µg/L	50.0	49.4	99	80 - 120	2016-08-04
p-Isopropyltoluene		1,2,3	µg/L	50.0	49.4	99	80 - 120	2016-08-04
4-Chlorotoluene		1,2,3,4	µg/L	50.0	47.8	96	80 - 120	2016-08-04
1,2-Dichlorobenzene (ortho)		1,2,3,4	µg/L	50.0	48.7	97	80 - 120	2016-08-04
n-Butylbenzene		1,2,3,4	µg/L	50.0	51.2	102	80 - 120	2016-08-04
1,2-Dibromo-3-chloropropane		1,3	µg/L	50.0	46.0	92	80 - 120	2016-08-04
1,2,3-Trichlorobenzene		1,2,3,4	µg/L	50.0	50.9	102	80 - 120	2016-08-04
1,2,4-Trichlorobenzene		1,2,3,4	µg/L	50.0	52.8	106	80 - 120	2016-08-04
Naphthalene		1,2,3,4	µg/L	50.0	49.4	99	80 - 120	2016-08-04
Hexachlorobutadiene		1,2,3,4	µg/L	50.0	51.8	104	80 - 120	2016-08-04

Standard (CCV-1)

QC Batch: 131953

Date Analyzed: 2016-08-05

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3	mg/L	1.00	1.16	116	80 - 120	2016-08-05

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3	mg/L	1.00	1.10	110	80 - 120	2016-08-05

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	L-A-B	L2418	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	NELAP	T104704219-16-12	Lubbock
4		2015-066	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

