

Certifications

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Analytical and Quality Control Report

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Report Date: August 2, 2016

Work Order: 16072912



Project Name: Lovington Leak
Project Number: Lovington Leak

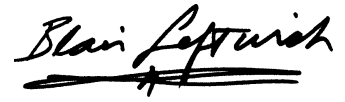
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
425442	Site 1 Spill	soil	2016-07-28	20:00	2016-07-29
425443	Site 1 Background	soil	2016-07-28	20:00	2016-07-29
425444	Site 2 Spill	soil	2016-07-28	20:15	2016-07-29
425445	Site 2 Background	soil	2016-07-28	20:15	2016-07-29
425446	Site 3 Spill	soil	2016-07-28	20:45	2016-07-29
425447	Site 3 Background	soil	2016-07-28	20:45	2016-07-29

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 44 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 stroke at the end.

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

Report Contents

Case Narrative	4
Analytical Report	5
Sample 425442 (Site 1 Spill)	5
Sample 425443 (Site 1 Background)	8
Sample 425444 (Site 2 Spill)	10
Sample 425445 (Site 2 Background)	13
Sample 425446 (Site 3 Spill)	16
Sample 425447 (Site 3 Background)	19
Method Blanks	23
QC Batch 131801 - Method Blank (1)	23
QC Batch 131808 - Method Blank (1)	23
QC Batch 131816 - Method Blank (1)	23
QC Batch 131821 - Method Blank (1)	23
QC Batch 131830 - Method Blank (1)	25
Laboratory Control Spikes	27
QC Batch 131801 - LCS (1)	27
QC Batch 131808 - LCS (1)	27
QC Batch 131816 - LCS (1)	28
QC Batch 131821 - LCS (1)	28
QC Batch 131830 - LCS (1)	31
Matrix Spikes	33
QC Batch 131801 - MS (1)	33
QC Batch 131808 - MS (1)	33
QC Batch 131816 - MS (1)	34
QC Batch 131821 - MS (1)	34
QC Batch 131830 - MS (1)	37
Calibration Standards	39
QC Batch 131801 - CCV (1)	39
QC Batch 131801 - CCV (2)	39
QC Batch 131808 - CCV (1)	39
QC Batch 131808 - CCV (2)	39
QC Batch 131816 - CCV (1)	39
QC Batch 131816 - CCV (2)	40
QC Batch 131821 - CCV (1)	40
QC Batch 131830 - CCV (1)	42
QC Batch 131830 - CCV (2)	42
Appendix	43
Report Definitions	43
Laboratory Certifications	43
Standard Flags	43
Attachments	43

Case Narrative

Samples for project Lovington Leak were received by TraceAnalysis, Inc. on 2016-07-29 and assigned to work order 16072912. Samples for work order 16072912 were received intact at a temperature of 4.0 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	111704	2016-07-29 at 15:05	131816	2016-07-29 at 21:59
TPH DRO	S 8015 D	111686	2016-07-29 at 14:00	131801	2016-08-01 at 07:32
TPH DRO	S 8015 D	111719	2016-08-01 at 10:00	131830	2016-08-01 at 15:40
TPH GRO	S 8015 D	111698	2016-07-29 at 14:00	131808	2016-07-29 at 14:00
Volatiles	S 8260 C	111708	2016-07-29 at 12:00	131821	2016-07-29 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 16072912 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.

Analytical Report

Sample: 425442 - Site 1 Spill

Laboratory: Lubbock
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 131816 Date Analyzed: 2016-07-29 Analyzed By: RL
Prep Batch: 111704 Sample Preparation: 2016-07-29 Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4	46.8	mg/Kg	1	25.0

Sample: 425442 - Site 1 Spill

Laboratory: Lubbock
Analysis: TPH DRO Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 131830 Date Analyzed: 2016-08-01 Analyzed By: HJ
Prep Batch: 111719 Sample Preparation: 2016-08-01 Prepared By: HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			21.8	mg/Kg	1	25.0	87	58.2 - 150

Sample: 425442 - Site 1 Spill

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 131808 Date Analyzed: 2016-07-29 Analyzed By: MT
Prep Batch: 111698 Sample Preparation: 2016-07-29 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	B,U	1,2,3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.49	mg/Kg	1	2.00	125	76.4 - 123

continued ...

Report Date: August 2, 2016
Lovington Leak

Work Order: 16072912
Lovington Leak

Page Number: 6 of 44

sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			2.29	mg/Kg	1	2.00	114	69.4 - 120

Sample: 425442 - Site 1 Spill

Laboratory: Lubbock
Analysis: Volatiles
QC Batch: 131821
Prep Batch: 111708

Analytical Method: S 8260 C
Date Analyzed: 2016-07-29
Sample Preparation: 2016-07-29

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Bromochloromethane	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dichlorodifluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloromethane (methyl chloride)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Vinyl Chloride	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromomethane (methyl bromide)	U	1,2,3,4	<100	µg/Kg	1	100
Chloroethane	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichlorofluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acetone	Qc,U	1,2,3,4	<200	µg/Kg	1	200
Iodomethane (methyl iodide)	Qs,U	1,2,3,4	<100	µg/Kg	1	100
Carbon Disulfide	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acrylonitrile	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Butanone (MEK)	Qc,Qr,U	1,2,3,4	<100	µg/Kg	1	100
4-Methyl-2-pentanone (MIBK)	Qr,U	1,2,3,4	<100	µg/Kg	1	100
2-Hexanone	Qc,U	1,2,3,4	<100	µg/Kg	1	100
trans 1,4-Dichloro-2-butene	Qc,Qr,U	1,2,3,4	<200	µg/Kg	1	200
1,1-Dichloroethene	Qr,Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Methylene chloride	B,Qs,U	1,2,3,4	<100	µg/Kg	1	100
MTBE	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,2-Dichloroethene	Qr,Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloroethane	Qr,Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,2-Dichloroethene	Qr,Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2,2-Dichloropropane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloroethane (EDC)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloroform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1-Trichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloropropene	Qr,Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Benzene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Carbon Tetrachloride	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloropropane	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichloroethene (TCE)	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromomethane (methylene bromide)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromodichloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0

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sample 425442 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
2-Chloroethyl vinyl ether	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Toluene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2-Trichloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichloropropane	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromochloromethane	Qr,U	1,3,4	<20.0	µg/Kg	1	20.0
1,2-Dibromoethane (EDB)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Tetrachloroethene (PCE)	Qr,Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chlorobenzene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Ethylbenzene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
m,p-Xylene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromoform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Styrene	Qr,Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
o-Xylene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2,2-Tetrachloroethane	Qr,Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chlorotoluene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,3-Trichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Isopropylbenzene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromobenzene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Propylbenzene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3,5-Trimethylbenzene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
tert-Butylbenzene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,4-Trimethylbenzene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,4-Dichlorobenzene (para)	Qr,Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
sec-Butylbenzene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichlorobenzene (meta)	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
p-Isopropyltoluene	Qs,U	1,2,3	<20.0	µg/Kg	1	20.0
4-Chlorotoluene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichlorobenzene (ortho)	Qr,Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Butylbenzene	Qs,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dibromo-3-chloropropane	Qr,U	1,3,4	<100	µg/Kg	1	100
1,2,3-Trichlorobenzene	Qs,U	1,2,3,4	<100	µg/Kg	1	100
1,2,4-Trichlorobenzene	Qs,U	1,2,3,4	<100	µg/Kg	1	100
Naphthalene	Qs,U	1,2,3,4	<100	µg/Kg	1	100
Hexachlorobutadiene	Qs,U	1,2,3,4	<100	µg/Kg	1	100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		4	793	µg/Kg	1	840	94	78 - 119
Toluene-d8			863	µg/Kg	1	840	103	85 - 116
4-Bromofluorobenzene (4-BFB)			804	µg/Kg	1	840	96	79 - 119

Report Date: August 2, 2016
Lovington Leak

Work Order: 16072912
Lovington Leak

Page Number: 8 of 44

Sample: 425443 - Site 1 Background

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-07-29	Analyzed By:	RL
QC Batch:	131816	Sample Preparation:	2016-07-29	Prepared By:	RL
Prep Batch:	111704				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4	<25.0	mg/Kg	1	25.0

Sample: 425443 - Site 1 Background

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-08-01	Analyzed By:	HJ
QC Batch:	131801	Sample Preparation:	2016-07-29	Prepared By:	HJ
Prep Batch:	111686				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			20.8	mg/Kg	1	25.0	83	58.2 - 150

Sample: 425443 - Site 1 Background

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-07-29	Analyzed By:	MT
QC Batch:	131808	Sample Preparation:	2016-07-29	Prepared By:	MT
Prep Batch:	111698				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	B,Jb	1,2,3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.36	mg/Kg	1	2.00	118	76.4 - 123
4-Bromofluorobenzene (4-BFB)			2.11	mg/Kg	1	2.00	106	69.4 - 120

Sample: 425443 - Site 1 Background

Laboratory: Lubbock
 Analysis: Volatiles
 QC Batch: 131821
 Prep Batch: 111708

Analytical Method: S 8260 C
 Date Analyzed: 2016-07-29
 Sample Preparation: 2016-07-29

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Bromochloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dichlorodifluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloromethane (methyl chloride)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Vinyl Chloride	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromomethane (methyl bromide)	U	1,2,3,4	<100	µg/Kg	1	100
Chloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichlorofluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acetone	Qc,U	1,2,3,4	<200	µg/Kg	1	200
Iodomethane (methyl iodide)	U	1,2,3,4	<100	µg/Kg	1	100
Carbon Disulfide	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acrylonitrile	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Butanone (MEK)	Qc,Qr,U	1,2,3,4	<100	µg/Kg	1	100
4-Methyl-2-pentanone (MIBK)	Qr,U	1,2,3,4	<100	µg/Kg	1	100
2-Hexanone	Qc,U	1,2,3,4	<100	µg/Kg	1	100
trans 1,4-Dichloro-2-butene	Qc,Qr,U	1,2,3,4	<200	µg/Kg	1	200
1,1-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Methylene chloride	B,Jb	1,2,3,4	<100	µg/Kg	1	100
MTBE	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2,2-Dichloropropane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloroethane (EDC)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloroform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1-Trichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloropropene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Benzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Carbon Tetrachloride	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichloroethene (TCE)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromomethane (methylene bromide)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromodichloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chloroethyl vinyl ether	U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Toluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2-Trichloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromochloromethane	Qr,U	1,3,4	<20.0	µg/Kg	1	20.0

continued ...

sample 425443 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
1,2-Dibromoethane (EDB)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Tetrachloroethene (PCE)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chlorobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Ethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
m,p-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromoform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Styrene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
o-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,3-Trichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Isopropylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Propylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3,5-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
tert-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,4-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,4-Dichlorobenzene (para)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
sec-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichlorobenzene (meta)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
p-Isopropyltoluene		1,2,3	22.8	µg/Kg	1	20.0
4-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichlorobenzene (ortho)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dibromo-3-chloropropane	Qr,U	1,3,4	<100	µg/Kg	1	100
1,2,3-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
1,2,4-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
Naphthalene	U	1,2,3,4	<100	µg/Kg	1	100
Hexachlorobutadiene	U	1,2,3,4	<100	µg/Kg	1	100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		4	900	µg/Kg	1	980	92	78 - 119
Toluene-d8			999	µg/Kg	1	980	102	85 - 116
4-Bromofluorobenzene (4-BFB)			916	µg/Kg	1	980	93	79 - 119

Report Date: August 2, 2016
Lovington Leak

Work Order: 16072912
Lovington Leak

Page Number: 11 of 44

Sample: 425444 - Site 2 Spill

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-07-29	Analyzed By:	RL
QC Batch:	131816	Sample Preparation:	2016-07-29	Prepared By:	RL
Prep Batch:	111704				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4	603	mg/Kg	5	25.0

Sample: 425444 - Site 2 Spill

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-08-01	Analyzed By:	HJ
QC Batch:	131830	Sample Preparation:	2016-08-01	Prepared By:	HJ
Prep Batch:	111719				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			23.2	mg/Kg	1	25.0	93	58.2 - 150

Sample: 425444 - Site 2 Spill

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-07-29	Analyzed By:	MT
QC Batch:	131808	Sample Preparation:	2016-07-29	Prepared By:	MT
Prep Batch:	111698				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	B,U	1,2,3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.28	mg/Kg	1	2.00	114	76.4 - 123
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	1	2.00	101	69.4 - 120

Sample: 425444 - Site 2 Spill

Laboratory: Lubbock
 Analysis: Volatiles
 QC Batch: 131821
 Prep Batch: 111708

Analytical Method: S 8260 C
 Date Analyzed: 2016-07-29
 Sample Preparation: 2016-07-29

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Bromochloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dichlorodifluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloromethane (methyl chloride)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Vinyl Chloride	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromomethane (methyl bromide)	U	1,2,3,4	<100	µg/Kg	1	100
Chloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichlorofluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acetone	Qc,U	1,2,3,4	<200	µg/Kg	1	200
Iodomethane (methyl iodide)	U	1,2,3,4	<100	µg/Kg	1	100
Carbon Disulfide	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acrylonitrile	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Butanone (MEK)	Qc,Qr,U	1,2,3,4	<100	µg/Kg	1	100
4-Methyl-2-pentanone (MIBK)	Qr,U	1,2,3,4	<100	µg/Kg	1	100
2-Hexanone	Qc,U	1,2,3,4	<100	µg/Kg	1	100
trans 1,4-Dichloro-2-butene	Qc,Qr,U	1,2,3,4	<200	µg/Kg	1	200
1,1-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Methylene chloride	B,Jb	1,2,3,4	<100	µg/Kg	1	100
MTBE	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2,2-Dichloropropane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloroethane (EDC)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloroform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1-Trichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloropropene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Benzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Carbon Tetrachloride	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichloroethene (TCE)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromomethane (methylene bromide)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromodichloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chloroethyl vinyl ether	U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Toluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2-Trichloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromochloromethane	Qr,U	1,3,4	<20.0	µg/Kg	1	20.0

continued ...

sample 425444 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
1,2-Dibromoethane (EDB)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Tetrachloroethene (PCE)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chlorobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Ethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
m,p-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromoform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Styrene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
o-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,3-Trichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Isopropylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Propylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3,5-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
tert-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,4-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,4-Dichlorobenzene (para)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
sec-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichlorobenzene (meta)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
p-Isopropyltoluene	U	1,2,3	<20.0	µg/Kg	1	20.0
4-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichlorobenzene (ortho)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dibromo-3-chloropropane	Qr,U	1,3,4	<100	µg/Kg	1	100
1,2,3-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
1,2,4-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
Naphthalene	U	1,2,3,4	<100	µg/Kg	1	100
Hexachlorobutadiene	U	1,2,3,4	<100	µg/Kg	1	100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		4	874	µg/Kg	1	965	90	78 - 119
Toluene-d8			989	µg/Kg	1	965	102	85 - 116
4-Bromofluorobenzene (4-BFB)			904	µg/Kg	1	965	94	79 - 119

Report Date: August 2, 2016
Lovington Leak

Work Order: 16072912
Lovington Leak

Page Number: 14 of 44

Sample: 425445 - Site 2 Background

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-07-29	Analyzed By:	RL
QC Batch:	131816	Sample Preparation:	2016-07-29	Prepared By:	RL
Prep Batch:	111704				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4	<25.0	mg/Kg	1	25.0

Sample: 425445 - Site 2 Background

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-08-01	Analyzed By:	HJ
QC Batch:	131801	Sample Preparation:	2016-07-29	Prepared By:	HJ
Prep Batch:	111686				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			19.0	mg/Kg	1	25.0	76	58.2 - 150

Sample: 425445 - Site 2 Background

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-07-29	Analyzed By:	MT
QC Batch:	131808	Sample Preparation:	2016-07-29	Prepared By:	MT
Prep Batch:	111698				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	B,U	1,2,3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.34	mg/Kg	1	2.00	117	76.4 - 123
4-Bromofluorobenzene (4-BFB)			2.05	mg/Kg	1	2.00	102	69.4 - 120

Sample: 425445 - Site 2 Background

Laboratory: Lubbock
 Analysis: Volatiles
 QC Batch: 131821
 Prep Batch: 111708

Analytical Method: S 8260 C
 Date Analyzed: 2016-07-29
 Sample Preparation: 2016-07-29

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Bromochloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dichlorodifluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloromethane (methyl chloride)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Vinyl Chloride	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromomethane (methyl bromide)	U	1,2,3,4	<100	µg/Kg	1	100
Chloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichlorofluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acetone	Qc,U	1,2,3,4	<200	µg/Kg	1	200
Iodomethane (methyl iodide)	U	1,2,3,4	<100	µg/Kg	1	100
Carbon Disulfide	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acrylonitrile	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Butanone (MEK)	Qc,Qr,U	1,2,3,4	<100	µg/Kg	1	100
4-Methyl-2-pentanone (MIBK)	Qr,U	1,2,3,4	<100	µg/Kg	1	100
2-Hexanone	Qc,U	1,2,3,4	<100	µg/Kg	1	100
trans 1,4-Dichloro-2-butene	Qc,Qr,U	1,2,3,4	<200	µg/Kg	1	200
1,1-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Methylene chloride	B,Jb	1,2,3,4	<100	µg/Kg	1	100
MTBE	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2,2-Dichloropropane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloroethane (EDC)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloroform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1-Trichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloropropene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Benzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Carbon Tetrachloride	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichloroethene (TCE)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromomethane (methylene bromide)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromodichloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chloroethyl vinyl ether	U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Toluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2-Trichloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromochloromethane	Qr,U	1,3,4	<20.0	µg/Kg	1	20.0

continued ...

sample 425445 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
1,2-Dibromoethane (EDB)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Tetrachloroethene (PCE)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chlorobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Ethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
m,p-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromoform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Styrene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
o-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,3-Trichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Isopropylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Propylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3,5-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
tert-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,4-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,4-Dichlorobenzene (para)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
sec-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichlorobenzene (meta)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
p-Isopropyltoluene	U	1,2,3	<20.0	µg/Kg	1	20.0
4-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichlorobenzene (ortho)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dibromo-3-chloropropane	Qr,U	1,3,4	<100	µg/Kg	1	100
1,2,3-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
1,2,4-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
Naphthalene	U	1,2,3,4	<100	µg/Kg	1	100
Hexachlorobutadiene	U	1,2,3,4	<100	µg/Kg	1	100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		4	827	µg/Kg	1	965	86	78 - 119
Toluene-d8			975	µg/Kg	1	965	101	85 - 116
4-Bromofluorobenzene (4-BFB)			906	µg/Kg	1	965	94	79 - 119

Report Date: August 2, 2016
Lovington Leak

Work Order: 16072912
Lovington Leak

Page Number: 17 of 44

Sample: 425446 - Site 3 Spill

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-07-29	Analyzed By:	RL
QC Batch:	131816	Sample Preparation:	2016-07-29	Prepared By:	RL
Prep Batch:	111704				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4	27.9	mg/Kg	1	25.0

Sample: 425446 - Site 3 Spill

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-08-01	Analyzed By:	HJ
QC Batch:	131830	Sample Preparation:	2016-08-01	Prepared By:	HJ
Prep Batch:	111719				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			22.7	mg/Kg	1	25.0	91	58.2 - 150

Sample: 425446 - Site 3 Spill

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-07-29	Analyzed By:	MT
QC Batch:	131808	Sample Preparation:	2016-07-29	Prepared By:	MT
Prep Batch:	111698				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	B,Jb	1,2,3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.18	mg/Kg	1	2.00	109	76.4 - 123
4-Bromofluorobenzene (4-BFB)			1.99	mg/Kg	1	2.00	100	69.4 - 120

Sample: 425446 - Site 3 Spill

Laboratory: Lubbock
 Analysis: Volatiles
 QC Batch: 131821
 Prep Batch: 111708

Analytical Method: S 8260 C
 Date Analyzed: 2016-07-29
 Sample Preparation: 2016-07-29

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Bromochloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dichlorodifluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloromethane (methyl chloride)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Vinyl Chloride	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromomethane (methyl bromide)	U	1,2,3,4	<100	µg/Kg	1	100
Chloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichlorofluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acetone	Qc,U	1,2,3,4	<200	µg/Kg	1	200
Iodomethane (methyl iodide)	U	1,2,3,4	<100	µg/Kg	1	100
Carbon Disulfide	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acrylonitrile	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Butanone (MEK)	Qc,Qr,U	1,2,3,4	<100	µg/Kg	1	100
4-Methyl-2-pentanone (MIBK)	Qr,U	1,2,3,4	<100	µg/Kg	1	100
2-Hexanone	Qc,U	1,2,3,4	<100	µg/Kg	1	100
trans 1,4-Dichloro-2-butene	Qc,Qr,U	1,2,3,4	<200	µg/Kg	1	200
1,1-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Methylene chloride	B,Jb	1,2,3,4	<100	µg/Kg	1	100
MTBE	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2,2-Dichloropropane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloroethane (EDC)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloroform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1-Trichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloropropene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Benzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Carbon Tetrachloride	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichloroethene (TCE)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromomethane (methylene bromide)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromodichloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chloroethyl vinyl ether	U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Toluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2-Trichloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromochloromethane	Qr,U	1,3,4	<20.0	µg/Kg	1	20.0

continued ...

sample 425446 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
1,2-Dibromoethane (EDB)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Tetrachloroethene (PCE)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chlorobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Ethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
m,p-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromoform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Styrene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
o-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,3-Trichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Isopropylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Propylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3,5-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
tert-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,4-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,4-Dichlorobenzene (para)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
sec-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichlorobenzene (meta)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
p-Isopropyltoluene	U	1,2,3	<20.0	µg/Kg	1	20.0
4-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichlorobenzene (ortho)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dibromo-3-chloropropane	Qr,U	1,3,4	<100	µg/Kg	1	100
1,2,3-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
1,2,4-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
Naphthalene	U	1,2,3,4	<100	µg/Kg	1	100
Hexachlorobutadiene	U	1,2,3,4	<100	µg/Kg	1	100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		4	787	µg/Kg	1	915	86	78 - 119
Toluene-d8			919	µg/Kg	1	915	100	85 - 116
4-Bromofluorobenzene (4-BFB)			855	µg/Kg	1	915	93	79 - 119

Report Date: August 2, 2016
Lovington Leak

Work Order: 16072912
Lovington Leak

Page Number: 20 of 44

Sample: 425447 - Site 3 Background

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-07-29	Analyzed By:	RL
QC Batch:	131816	Sample Preparation:	2016-07-29	Prepared By:	RL
Prep Batch:	111704				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4	<25.0	mg/Kg	1	25.0

Sample: 425447 - Site 3 Background

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-08-01	Analyzed By:	HJ
QC Batch:	131801	Sample Preparation:	2016-07-29	Prepared By:	HJ
Prep Batch:	111686				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			22.0	mg/Kg	1	25.0	88	58.2 - 150

Sample: 425447 - Site 3 Background

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-07-29	Analyzed By:	MT
QC Batch:	131808	Sample Preparation:	2016-07-29	Prepared By:	MT
Prep Batch:	111698				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	B,U	1,2,3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.25	mg/Kg	1	2.00	112	76.4 - 123
4-Bromofluorobenzene (4-BFB)			2.01	mg/Kg	1	2.00	100	69.4 - 120

Sample: 425447 - Site 3 Background

Laboratory: Lubbock
 Analysis: Volatiles
 QC Batch: 131821
 Prep Batch: 111708

Analytical Method: S 8260 C
 Date Analyzed: 2016-07-29
 Sample Preparation: 2016-07-29

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Bromochloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dichlorodifluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloromethane (methyl chloride)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Vinyl Chloride	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromomethane (methyl bromide)	U	1,2,3,4	<100	µg/Kg	1	100
Chloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichlorofluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acetone	Qc,U	1,2,3,4	<200	µg/Kg	1	200
Iodomethane (methyl iodide)	U	1,2,3,4	<100	µg/Kg	1	100
Carbon Disulfide	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acrylonitrile	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Butanone (MEK)	Qc,Qr,U	1,2,3,4	<100	µg/Kg	1	100
4-Methyl-2-pentanone (MIBK)	Qr,U	1,2,3,4	<100	µg/Kg	1	100
2-Hexanone	Qc,U	1,2,3,4	<100	µg/Kg	1	100
trans 1,4-Dichloro-2-butene	Qc,Qr,U	1,2,3,4	<200	µg/Kg	1	200
1,1-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Methylene chloride	B,Jb	1,2,3,4	<100	µg/Kg	1	100
MTBE	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2,2-Dichloropropane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloroethane (EDC)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloroform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1-Trichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloropropene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Benzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Carbon Tetrachloride	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichloroethene (TCE)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromomethane (methylene bromide)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromodichloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chloroethyl vinyl ether	U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Toluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2-Trichloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromochloromethane	Qr,U	1,3,4	<20.0	µg/Kg	1	20.0

continued ...

sample 425447 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
1,2-Dibromoethane (EDB)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Tetrachloroethene (PCE)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chlorobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Ethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
m,p-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromoform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Styrene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
o-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,3-Trichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Isopropylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Propylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3,5-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
tert-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,4-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,4-Dichlorobenzene (para)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
sec-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichlorobenzene (meta)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
p-Isopropyltoluene	U	1,2,3	<20.0	µg/Kg	1	20.0
4-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichlorobenzene (ortho)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dibromo-3-chloropropane	Qr,U	1,3,4	<100	µg/Kg	1	100
1,2,3-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
1,2,4-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
Naphthalene	U	1,2,3,4	<100	µg/Kg	1	100
Hexachlorobutadiene	U	1,2,3,4	<100	µg/Kg	1	100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		4	884	µg/Kg	1	990	89	78 - 119
Toluene-d8			987	µg/Kg	1	990	100	85 - 116
4-Bromofluorobenzene (4-BFB)			901	µg/Kg	1	990	91	79 - 119

Method Blanks

Method Blank (1) QC Batch: 131801

QC Batch: 131801 Date Analyzed: 2016-08-01 Analyzed By: HJ
Prep Batch: 111686 QC Preparation: 2016-07-29 Prepared By: HJ

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1,2,3	<8.47	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			26.8	mg/Kg	1	25.0	107	58.2 - 150

Method Blank (1) QC Batch: 131808

QC Batch: 131808 Date Analyzed: 2016-07-29 Analyzed By: MT
Prep Batch: 111698 QC Preparation: 2016-07-29 Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO	B	B	0.376	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Q _{sr}	Q _{sr}	2.47	mg/Kg	1	2.00	124	76.4 - 123
4-Bromofluorobenzene (4-BFB)			2.20	mg/Kg	1	2.00	110	69.4 - 120

Method Blank (1) QC Batch: 131816

QC Batch: 131816 Date Analyzed: 2016-07-29 Analyzed By: RL
Prep Batch: 111704 QC Preparation: 2016-07-29 Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4	<4.44	mg/Kg	25

Method Blank (1) QC Batch: 131821

QC Batch: 131821
 Prep Batch: 111708

Date Analyzed: 2016-07-29
 QC Preparation: 2016-07-29

Analyzed By: KB
 Prepared By: KB

Parameter	Flag	Cert	MDL Result	Units	RL
Bromochloromethane		1,2,3,4	<9.28	µg/Kg	20
Dichlorodifluoromethane		1,2,3,4	<9.82	µg/Kg	20
Chloromethane (methyl chloride)		1,2,3,4	<11.7	µg/Kg	20
Vinyl Chloride		1,2,3,4	<10.6	µg/Kg	20
Bromomethane (methyl bromide)		1,2,3,4	<13.5	µg/Kg	100
Chloroethane		1,2,3,4	<9.16	µg/Kg	20
Trichlorofluoromethane		1,2,3,4	<12.4	µg/Kg	20
Acetone		1,2,3,4	<7.34	µg/Kg	200
Iodomethane (methyl iodide)		1,2,3,4	<8.64	µg/Kg	100
Carbon Disulfide		1,2,3,4	<9.90	µg/Kg	20
Acrylonitrile		1,2,3,4	<9.14	µg/Kg	20
2-Butanone (MEK)		1,2,3,4	<13.4	µg/Kg	100
4-Methyl-2-pentanone (MIBK)		1,2,3,4	<14.1	µg/Kg	100
2-Hexanone		1,2,3,4	<10.6	µg/Kg	100
trans 1,4-Dichloro-2-butene		1,2,3,4	<8.49	µg/Kg	200
1,1-Dichloroethene		1,2,3,4	<10.4	µg/Kg	20
Methylene chloride	B	B	21.9	µg/Kg	100
MTBE		1,2,3,4	<11.4	µg/Kg	20
trans-1,2-Dichloroethene		1,2,3,4	<9.80	µg/Kg	20
1,1-Dichloroethane		1,2,3,4	<9.82	µg/Kg	20
cis-1,2-Dichloroethene		1,2,3,4	<9.58	µg/Kg	20
2,2-Dichloropropane		1,2,3,4	<8.99	µg/Kg	20
1,2-Dichloroethane (EDC)		1,2,3,4	<9.58	µg/Kg	20
Chloroform		1,2,3,4	<9.68	µg/Kg	20
1,1,1-Trichloroethane		1,2,3,4	<10.6	µg/Kg	20
1,1-Dichloropropene		1,2,3,4	<9.74	µg/Kg	20
Benzene		1,2,3,4	<10.3	µg/Kg	20
Carbon Tetrachloride		1,2,3,4	<8.88	µg/Kg	20
1,2-Dichloropropane		1,2,3,4	<9.48	µg/Kg	20
Trichloroethene (TCE)		1,2,3,4	<10.4	µg/Kg	20
Dibromomethane (methylene bromide)		1,2,3,4	<9.65	µg/Kg	20
Bromodichloromethane		1,2,3,4	<9.23	µg/Kg	20
2-Chloroethyl vinyl ether		1,2,3,4	<10.8	µg/Kg	20
cis-1,3-Dichloropropene		1,2,3,4	<9.76	µg/Kg	20
trans-1,3-Dichloropropene		1,2,3,4	<9.24	µg/Kg	20
Toluene		1,2,3,4	<9.74	µg/Kg	20
1,1,2-Trichloroethane		1,2,3,4	<11.1	µg/Kg	20
1,3-Dichloropropane		1,2,3,4	<10.4	µg/Kg	20
Dibromochloromethane		1,3,4	<9.66	µg/Kg	20
1,2-Dibromoethane (EDB)		1,2,3,4	<10.8	µg/Kg	20
Tetrachloroethene (PCE)		1,2,3,4	<6.38	µg/Kg	20

continued ...

method blank continued ...

Parameter	Flag	Cert	MDL Result	Units	RL
Chlorobenzene		1,2,3,4	<10.5	µg/Kg	20
1,1,1,2-Tetrachloroethane		1,2,3,4	<10.2	µg/Kg	20
Ethylbenzene		1,2,3,4	<10.8	µg/Kg	20
m,p-Xylene		1,2,3,4	<11.0	µg/Kg	20
Bromoform		1,2,3,4	<8.43	µg/Kg	20
Styrene		1,2,3,4	<9.62	µg/Kg	20
o-Xylene		1,2,3,4	<11.0	µg/Kg	20
1,1,2,2-Tetrachloroethane		1,2,3,4	<10.2	µg/Kg	20
2-Chlorotoluene		1,2,3,4	<11.5	µg/Kg	20
1,2,3-Trichloropropane		1,2,3,4	<9.22	µg/Kg	20
Isopropylbenzene		1,2,3,4	<10.2	µg/Kg	20
Bromobenzene		1,2,3,4	<11.2	µg/Kg	20
n-Propylbenzene		1,2,3,4	<10.6	µg/Kg	20
1,3,5-Trimethylbenzene		1,2,3,4	<11.5	µg/Kg	20
tert-Butylbenzene		1,2,3,4	<10.3	µg/Kg	20
1,2,4-Trimethylbenzene		1,2,3,4	<11.0	µg/Kg	20
1,4-Dichlorobenzene (para)		1,2,3,4	<12.0	µg/Kg	20
sec-Butylbenzene		1,2,3,4	<11.3	µg/Kg	20
1,3-Dichlorobenzene (meta)		1,2,3,4	<11.6	µg/Kg	20
p-Isopropyltoluene		1,2,3	<11.1	µg/Kg	20
4-Chlorotoluene		1,2,3,4	<11.7	µg/Kg	20
1,2-Dichlorobenzene (ortho)		1,2,3,4	<12.0	µg/Kg	20
n-Butylbenzene		1,2,3,4	<11.0	µg/Kg	20
1,2-Dibromo-3-chloropropane		1,3,4	<9.07	µg/Kg	100
1,2,3-Trichlorobenzene		1,2,3,4	<12.6	µg/Kg	100
1,2,4-Trichlorobenzene		1,2,3,4	<12.4	µg/Kg	100
Naphthalene		1,2,3,4	<10.7	µg/Kg	100
Hexachlorobutadiene		1,2,3,4	<17.2	µg/Kg	100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		4	950	µg/Kg	1	1000	95	78 - 119
Toluene-d8			977	µg/Kg	1	1000	98	85 - 116
4-Bromofluorobenzene (4-BFB)			921	µg/Kg	1	1000	92	79 - 119

Method Blank (1) QC Batch: 131830

QC Batch: 131830
 Prep Batch: 111719

Date Analyzed: 2016-08-01
 QC Preparation: 2016-08-01

Analyzed By: HJ
 Prepared By: HJ

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1,2,3	<8.47	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			21.8	mg/Kg	1	25.0	87	58.2 - 150

Report Date: August 2, 2016
Lovington Leak

Work Order: 16072912
Lovington Leak

Page Number: 27 of 44

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 131801
Prep Batch: 111686

Date Analyzed: 2016-08-01
QC Preparation: 2016-07-29

Analyzed By: HJ
Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3	391	mg/Kg	1	500	<8.47	78	68.5 - 136

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	396	mg/Kg	1	500	<8.47	79	68.5 - 136	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
n-Tricosane	26.4	25.9	mg/Kg	1	25.0	106	104	58.2 - 150

Laboratory Control Spike (LCS-1)

QC Batch: 131808
Prep Batch: 111698

Date Analyzed: 2016-07-29
QC Preparation: 2016-07-29

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3	22.3	mg/Kg	1	20.0	0.376	110	64.2 - 120

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
GRO		1,2,3	22.3	mg/Kg	1	20.0	0.376	110	64.2 - 120	0	20

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

				LCS	LCSD		Spike	LCS	LCSD	Rec.	
Surrogate				Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)				2.33	2.18	mg/Kg	1	2.00	116	109	76.4 - 123
4-Bromofluorobenzene (4-BFB)	Q _{sr}	Q _{sr}		2.44	2.43	mg/Kg	1	2.00	122	122	69.4 - 120

Report Date: August 2, 2016
Lovington Leak

Work Order: 16072912
Lovington Leak

Page Number: 28 of 44

Laboratory Control Spike (LCS-1)

QC Batch: 131816
Prep Batch: 111704

Date Analyzed: 2016-07-29
QC Preparation: 2016-07-29

Analyzed By: RL
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4	243	mg/Kg	1	250	<4.44	97	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		3,4	244	mg/Kg	1	250	<4.44	98	90 - 110	0	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: 131821
Prep Batch: 111708

Date Analyzed: 2016-07-29
QC Preparation: 2016-07-29

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	966	µg/Kg	1	1000	<9.28	97	78 - 125
Dichlorodifluoromethane		1,2,3,4	941	µg/Kg	1	1000	<9.82	94	29 - 149
Chloromethane (methyl chloride)		1,2,3,4	830	µg/Kg	1	1000	<11.7	83	50 - 136
Vinyl Chloride		1,2,3,4	884	µg/Kg	1	1000	<10.6	88	56 - 135
Bromomethane (methyl bromide)		1,2,3,4	851	µg/Kg	1	1000	<13.5	85	53 - 143
Chloroethane		1,2,3,4	892	µg/Kg	1	1000	<9.16	89	59 - 139
Trichlorofluoromethane		1,2,3,4	923	µg/Kg	1	1000	<12.4	92	62 - 140
Acetone		1,2,3,4	748	µg/Kg	1	1000	<7.34	75	36 - 164
Iodomethane (methyl iodide)		1,2,3,4	980	µg/Kg	1	1000	<8.64	98	71 - 131
Carbon Disulfide		1,2,3,4	985	µg/Kg	1	1000	<9.90	98	63 - 132
Acrylonitrile		1,2,3,4	836	µg/Kg	1	1000	<9.14	84	65 - 134
2-Butanone (MEK)		1,2,3,4	572	µg/Kg	1	1000	<13.4	57	51 - 148
4-Methyl-2-pentanone (MIBK)		1,2,3,4	870	µg/Kg	1	1000	<14.1	87	65 - 135
2-Hexanone		1,2,3,4	780	µg/Kg	1	1000	<10.6	78	53 - 145
trans 1,4-Dichloro-2-butene		1,2,3,4	1270	µg/Kg	1	1000	<8.49	127	62 - 136
1,1-Dichloroethene		1,2,3,4	972	µg/Kg	1	1000	<10.4	97	70 - 131
Methylene chloride		1,2,3,4	904	µg/Kg	1	1000	21.9	88	70 - 128
MTBE		1,2,3,4	927	µg/Kg	1	1000	<11.4	93	73 - 125
trans-1,2-Dichloroethene		1,2,3,4	966	µg/Kg	1	1000	<9.80	97	74 - 125
1,1-Dichloroethane		1,2,3,4	951	µg/Kg	1	1000	<9.82	95	76 - 125
cis-1,2-Dichloroethene		1,2,3,4	972	µg/Kg	1	1000	<9.58	97	77 - 123

continued ...

control spikes continued ...

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
2,2-Dichloropropane		1,2,3,4	1090	µg/Kg	1	1000	<8.99	109	67 - 133
1,2-Dichloroethane (EDC)		1,2,3,4	957	µg/Kg	1	1000	<9.58	96	73 - 128
Chloroform		1,2,3,4	1010	µg/Kg	1	1000	<9.68	101	78 - 123
1,1,1-Trichloroethane		1,2,3,4	1040	µg/Kg	1	1000	<10.6	104	73 - 130
1,1-Dichloropropene		1,2,3,4	1010	µg/Kg	1	1000	<9.74	101	76 - 125
Benzene		1,2,3,4	969	µg/Kg	1	1000	<10.3	97	77 - 121
Carbon Tetrachloride		1,2,3,4	1050	µg/Kg	1	1000	<8.88	105	80 - 120
1,2-Dichloropropane		1,2,3,4	1030	µg/Kg	1	1000	<9.48	103	76 - 123
Trichloroethene (TCE)		1,2,3,4	958	µg/Kg	1	1000	<10.4	96	77 - 123
Dibromomethane (methylene bromide)		1,2,3,4	950	µg/Kg	1	1000	<9.65	95	78 - 125
Bromodichloromethane		1,2,3,4	1010	µg/Kg	1	1000	<9.23	101	75 - 127
2-Chloroethyl vinyl ether		1,2,3,4	1020	µg/Kg	1	1000	<10.8	102	43 - 149
cis-1,3-Dichloropropene		1,2,3,4	957	µg/Kg	1	1000	<9.76	96	74 - 126
trans-1,3-Dichloropropene		1,2,3,4	952	µg/Kg	1	1000	<9.24	95	71 - 130
Toluene		1,2,3,4	983	µg/Kg	1	1000	<9.74	98	77 - 121
1,1,2-Trichloroethane		1,2,3,4	928	µg/Kg	1	1000	<11.1	93	78 - 121
1,3-Dichloropropane		1,2,3,4	957	µg/Kg	1	1000	<10.4	96	77 - 121
Dibromochloromethane		1,3,4	990	µg/Kg	1	1000	<9.66	99	74 - 126
1,2-Dibromoethane (EDB)		1,2,3,4	958	µg/Kg	1	1000	<10.8	96	78 - 122
Tetrachloroethene (PCE)		1,2,3,4	967	µg/Kg	1	1000	<6.38	97	73 - 128
Chlorobenzene		1,2,3,4	1020	µg/Kg	1	1000	<10.5	102	79 - 120
1,1,1,2-Tetrachloroethane		1,2,3,4	1030	µg/Kg	1	1000	<10.2	103	78 - 125
Ethylbenzene		1,2,3,4	1000	µg/Kg	1	1000	<10.8	100	76 - 122
m,p-Xylene		1,2,3,4	2060	µg/Kg	1	2000	<11.0	103	77 - 124
Bromoform		1,2,3,4	1000	µg/Kg	1	1000	<8.43	100	67 - 132
Styrene		1,2,3,4	969	µg/Kg	1	1000	<9.62	97	76 - 124
o-Xylene		1,2,3,4	1040	µg/Kg	1	1000	<11.0	104	77 - 123
1,1,2,2-Tetrachloroethane		1,2,3,4	888	µg/Kg	1	1000	<10.2	89	70 - 124
2-Chlorotoluene		1,2,3,4	1010	µg/Kg	1	1000	<11.5	101	75 - 122
1,2,3-Trichloropropane		1,2,3,4	914	µg/Kg	1	1000	<9.22	91	73 - 125
Isopropylbenzene		1,2,3,4	990	µg/Kg	1	1000	<10.2	99	68 - 134
Bromobenzene		1,2,3,4	985	µg/Kg	1	1000	<11.2	98	78 - 121
n-Propylbenzene		1,2,3,4	994	µg/Kg	1	1000	<10.6	99	73 - 125
1,3,5-Trimethylbenzene		1,2,3,4	1020	µg/Kg	1	1000	<11.5	102	73 - 124
tert-Butylbenzene		1,2,3,4	1000	µg/Kg	1	1000	<10.3	100	73 - 125
1,2,4-Trimethylbenzene		1,2,3,4	1030	µg/Kg	1	1000	<11.0	103	75 - 123
1,4-Dichlorobenzene (para)		1,2,3,4	1030	µg/Kg	1	1000	<12.0	103	75 - 120
sec-Butylbenzene		1,2,3,4	1000	µg/Kg	1	1000	<11.3	100	73 - 126
1,3-Dichlorobenzene (meta)		1,2,3,4	1020	µg/Kg	1	1000	<11.6	102	77 - 121
p-Isopropyltoluene		1,2,3	1020	µg/Kg	1	1000	<11.1	102	73 - 127
4-Chlorotoluene		1,2,3,4	997	µg/Kg	1	1000	<11.7	100	72 - 124
1,2-Dichlorobenzene (ortho)		1,2,3,4	996	µg/Kg	1	1000	<12.0	100	78 - 121
n-Butylbenzene		1,2,3,4	1040	µg/Kg	1	1000	<11.0	104	70 - 128
1,2-Dibromo-3-chloropropane		1,3,4	895	µg/Kg	1	1000	<9.07	90	61 - 132

continued ...

control spikes continued ...

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,2,3-Trichlorobenzene		1,2,3,4	995	µg/Kg	1	1000	<12.6	100	66 - 130
1,2,4-Trichlorobenzene		1,2,3,4	1050	µg/Kg	1	1000	<12.4	105	67 - 129
Naphthalene		1,2,3,4	993	µg/Kg	1	1000	<10.7	99	62 - 129
Hexachlorobutadiene		1,2,3,4	1060	µg/Kg	1	1000	<17.2	106	31 - 135

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	944	µg/Kg	1	1000	<9.28	94	78 - 125	2	20
Dichlorodifluoromethane		1,2,3,4	861	µg/Kg	1	1000	<9.82	86	29 - 149	9	20
Chloromethane (methyl chloride)		1,2,3,4	795	µg/Kg	1	1000	<11.7	80	50 - 136	4	20
Vinyl Chloride		1,2,3,4	850	µg/Kg	1	1000	<10.6	85	56 - 135	4	20
Bromomethane (methyl bromide)		1,2,3,4	836	µg/Kg	1	1000	<13.5	84	53 - 143	2	20
Chloroethane		1,2,3,4	843	µg/Kg	1	1000	<9.16	84	59 - 139	6	20
Trichlorofluoromethane		1,2,3,4	866	µg/Kg	1	1000	<12.4	87	62 - 140	6	20
Acetone		1,2,3,4	774	µg/Kg	1	1000	<7.34	77	36 - 164	3	20
Iodomethane (methyl iodide)		1,2,3,4	945	µg/Kg	1	1000	<8.64	94	71 - 131	4	20
Carbon Disulfide		1,2,3,4	935	µg/Kg	1	1000	<9.90	94	63 - 132	5	20
Acrylonitrile		1,2,3,4	848	µg/Kg	1	1000	<9.14	85	65 - 134	1	20
2-Butanone (MEK)	Qr	Qr 1,2,3,4	746	µg/Kg	1	1000	<13.4	75	51 - 148	26	20
4-Methyl-2-pentanone (MIBK)		1,2,3,4	811	µg/Kg	1	1000	<14.1	81	65 - 135	7	20
2-Hexanone		1,2,3,4	784	µg/Kg	1	1000	<10.6	78	53 - 145	0	20
trans 1,4-Dichloro-2-butene		1,2,3,4	1130	µg/Kg	1	1000	<8.49	113	62 - 136	12	20
1,1-Dichloroethene		1,2,3,4	918	µg/Kg	1	1000	<10.4	92	70 - 131	6	20
Methylene chloride		1,2,3,4	874	µg/Kg	1	1000	21.9	85	70 - 128	3	20
MTBE		1,2,3,4	878	µg/Kg	1	1000	<11.4	88	73 - 125	5	20
trans-1,2-Dichloroethene		1,2,3,4	951	µg/Kg	1	1000	<9.80	95	74 - 125	2	20
1,1-Dichloroethane		1,2,3,4	900	µg/Kg	1	1000	<9.82	90	76 - 125	6	20
cis-1,2-Dichloroethene		1,2,3,4	950	µg/Kg	1	1000	<9.58	95	77 - 123	2	20
2,2-Dichloropropane		1,2,3,4	945	µg/Kg	1	1000	<8.99	94	67 - 133	14	20
1,2-Dichloroethane (EDC)		1,2,3,4	907	µg/Kg	1	1000	<9.58	91	73 - 128	5	20
Chloroform		1,2,3,4	975	µg/Kg	1	1000	<9.68	98	78 - 123	4	20
1,1,1-Trichloroethane		1,2,3,4	973	µg/Kg	1	1000	<10.6	97	73 - 130	7	20
1,1-Dichloropropene		1,2,3,4	968	µg/Kg	1	1000	<9.74	97	76 - 125	4	20
Benzene		1,2,3,4	932	µg/Kg	1	1000	<10.3	93	77 - 121	4	20
Carbon Tetrachloride		1,2,3,4	976	µg/Kg	1	1000	<8.88	98	80 - 120	7	20
1,2-Dichloropropane		1,2,3,4	980	µg/Kg	1	1000	<9.48	98	76 - 123	5	20
Trichloroethene (TCE)		1,2,3,4	940	µg/Kg	1	1000	<10.4	94	77 - 123	2	20
Dibromomethane (methylene bromide)		1,2,3,4	890	µg/Kg	1	1000	<9.65	89	78 - 125	6	20
Bromodichloromethane		1,2,3,4	978	µg/Kg	1	1000	<9.23	98	75 - 127	3	20
2-Chloroethyl vinyl ether		1,2,3,4	951	µg/Kg	1	1000	<10.8	95	43 - 149	7	20
cis-1,3-Dichloropropene		1,2,3,4	921	µg/Kg	1	1000	<9.76	92	74 - 126	4	20
trans-1,3-Dichloropropene		1,2,3,4	908	µg/Kg	1	1000	<9.24	91	71 - 130	5	20
Toluene		1,2,3,4	941	µg/Kg	1	1000	<9.74	94	77 - 121	4	20

continued ...

control spikes continued ...

Param	F	C	LCSD		Dil.	Spike Amount	Matrix Result	Rec.	Rec.		RPD	
			Result	Units					Limit	RPD	Limit	
1,1,2-Trichloroethane		1,2,3,4	910	µg/Kg	1	1000	<11.1	91	78 - 121	2	20	
1,3-Dichloropropane		1,2,3,4	925	µg/Kg	1	1000	<10.4	92	77 - 121	3	20	
Dibromochloromethane		1,3,4	942	µg/Kg	1	1000	<9.66	94	74 - 126	5	20	
1,2-Dibromoethane (EDB)		1,2,3,4	916	µg/Kg	1	1000	<10.8	92	78 - 122	4	20	
Tetrachloroethene (PCE)		1,2,3,4	983	µg/Kg	1	1000	<6.38	98	73 - 128	2	20	
Chlorobenzene		1,2,3,4	984	µg/Kg	1	1000	<10.5	98	79 - 120	4	20	
1,1,1,2-Tetrachloroethane		1,2,3,4	1000	µg/Kg	1	1000	<10.2	100	78 - 125	3	20	
Ethylbenzene		1,2,3,4	988	µg/Kg	1	1000	<10.8	99	76 - 122	1	20	
m,p-Xylene		1,2,3,4	1980	µg/Kg	1	2000	<11.0	99	77 - 124	4	20	
Bromoform		1,2,3,4	983	µg/Kg	1	1000	<8.43	98	67 - 132	2	20	
Styrene		1,2,3,4	946	µg/Kg	1	1000	<9.62	95	76 - 124	2	20	
o-Xylene		1,2,3,4	1010	µg/Kg	1	1000	<11.0	101	77 - 123	3	20	
1,1,2,2-Tetrachloroethane		1,2,3,4	831	µg/Kg	1	1000	<10.2	83	70 - 124	7	20	
2-Chlorotoluene		1,2,3,4	968	µg/Kg	1	1000	<11.5	97	75 - 122	4	20	
1,2,3-Trichloropropane		1,2,3,4	882	µg/Kg	1	1000	<9.22	88	73 - 125	4	20	
Isopropylbenzene		1,2,3,4	956	µg/Kg	1	1000	<10.2	96	68 - 134	4	20	
Bromobenzene		1,2,3,4	960	µg/Kg	1	1000	<11.2	96	78 - 121	3	20	
n-Propylbenzene		1,2,3,4	967	µg/Kg	1	1000	<10.6	97	73 - 125	3	20	
1,3,5-Trimethylbenzene		1,2,3,4	963	µg/Kg	1	1000	<11.5	96	73 - 124	6	20	
tert-Butylbenzene		1,2,3,4	965	µg/Kg	1	1000	<10.3	96	73 - 125	4	20	
1,2,4-Trimethylbenzene		1,2,3,4	980	µg/Kg	1	1000	<11.0	98	75 - 123	5	20	
1,4-Dichlorobenzene (para)		1,2,3,4	1000	µg/Kg	1	1000	<12.0	100	75 - 120	3	20	
sec-Butylbenzene		1,2,3,4	974	µg/Kg	1	1000	<11.3	97	73 - 126	3	20	
1,3-Dichlorobenzene (meta)		1,2,3,4	997	µg/Kg	1	1000	<11.6	100	77 - 121	2	20	
p-Isopropyltoluene		1,2,3	983	µg/Kg	1	1000	<11.1	98	73 - 127	4	20	
4-Chlorotoluene		1,2,3,4	964	µg/Kg	1	1000	<11.7	96	72 - 124	3	20	
1,2-Dichlorobenzene (ortho)		1,2,3,4	968	µg/Kg	1	1000	<12.0	97	78 - 121	3	20	
n-Butylbenzene		1,2,3,4	996	µg/Kg	1	1000	<11.0	100	70 - 128	4	20	
1,2-Dibromo-3-chloropropane		1,3,4	887	µg/Kg	1	1000	<9.07	89	61 - 132	1	20	
1,2,3-Trichlorobenzene		1,2,3,4	1030	µg/Kg	1	1000	<12.6	103	66 - 130	3	20	
1,2,4-Trichlorobenzene		1,2,3,4	1020	µg/Kg	1	1000	<12.4	102	67 - 129	3	20	
Naphthalene		1,2,3,4	971	µg/Kg	1	1000	<10.7	97	62 - 129	2	20	
Hexachlorobutadiene		1,2,3,4	1030	µg/Kg	1	1000	<17.2	103	31 - 135	3	20	

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

Surrogate		LCS		LCSD		Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
		Result	Result	Units	Dil.				
Dibromofluoromethane	4	994	991	µg/Kg	1	1000	99	99	78 - 119
Toluene-d8		1000	993	µg/Kg	1	1000	100	99	85 - 116
4-Bromofluorobenzene (4-BFB)		1010	990	µg/Kg	1	1000	101	99	79 - 119

Report Date: August 2, 2016
Lovington Leak

Work Order: 16072912
Lovington Leak

Page Number: 32 of 44

Laboratory Control Spike (LCS-1)

QC Batch: 131830
Prep Batch: 111719

Date Analyzed: 2016-08-01
QC Preparation: 2016-08-01

Analyzed By: HJ
Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3	440	mg/Kg	1	500	<8.47	88	68.5 - 136

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	450	mg/Kg	1	500	<8.47	90	68.5 - 136	2	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	24.9	25.7	mg/Kg	1	25.0	100	103	58.2 - 150

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 425237

QC Batch: 131801
Prep Batch: 111686

Date Analyzed: 2016-08-01
QC Preparation: 2016-07-29

Analyzed By: HJ
Prepared By: HJ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3	395	mg/Kg	1	500	<8.47	79	49.3 - 138

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	390	mg/Kg	1	500	<8.47	78	49.3 - 138	1	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	25.1	24.9	mg/Kg	1	25	100	100	58.2 - 150

Matrix Spike (MS-1) Spiked Sample: 425442

QC Batch: 131808
Prep Batch: 111698

Date Analyzed: 2016-07-29
QC Preparation: 2016-07-29

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3	16.1	mg/Kg	1	20.0	<0.271	80	35.3 - 129

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	19.2	mg/Kg	1	20.0	<0.271	96	35.3 - 129	18	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)	2.09	2.24	mg/Kg	1	2	104	112	76.4 - 123
4-Bromofluorobenzene (4-BFB)	2.18	2.34	mg/Kg	1	2	109	117	69.4 - 120

Report Date: August 2, 2016
Lovington Leak

Work Order: 16072912
Lovington Leak

Page Number: 34 of 44

Matrix Spike (MS-1) Spiked Sample: 425226

QC Batch: 131816
Prep Batch: 111704

Date Analyzed: 2016-07-29
QC Preparation: 2016-07-29

Analyzed By: RL
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4	254	mg/Kg	1	250	9.33	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		3,4	250	mg/Kg	1	250	9.33	96	80 - 120	2	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: 425442

QC Batch: 131821
Prep Batch: 111708

Date Analyzed: 2016-07-29
QC Preparation: 2016-07-29

Analyzed By: KB
Prepared By: KB

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromochloromethane	Qs	Qs	1,2,3,4	1630	µg/Kg	1	950	<9.28	172 78 - 125
Dichlorodifluoromethane			1,2,3,4	1250	µg/Kg	1	950	<9.82	132 29 - 149
Chloromethane (methyl chloride)			1,2,3,4	1130	µg/Kg	1	950	<11.7	119 50 - 136
Vinyl Chloride			1,2,3,4	1240	µg/Kg	1	950	<10.6	130 56 - 135
Bromomethane (methyl bromide)			1,2,3,4	758	µg/Kg	1	950	<13.5	80 53 - 143
Chloroethane	Qs	Qs	1,2,3,4	554	µg/Kg	1	950	<9.16	58 59 - 139
Trichlorofluoromethane			1,2,3,4	1130	µg/Kg	1	950	<12.4	119 62 - 140
Acetone			1,2,3,4	1170	µg/Kg	1	950	<7.34	123 36 - 164
Iodomethane (methyl iodide)	Qs	Qs	1,2,3,4	1620	µg/Kg	1	950	<8.64	170 71 - 131
Carbon Disulfide	Qs	Qs	1,2,3,4	1490	µg/Kg	1	950	<9.90	157 63 - 132
Acrylonitrile	Qs	Qs	1,2,3,4	1360	µg/Kg	1	950	<9.14	143 65 - 134
2-Butanone (MEK)			1,2,3,4	1310	µg/Kg	1	950	<13.4	138 51 - 148
4-Methyl-2-pentanone (MIBK)			1,2,3,4	1260	µg/Kg	1	950	<14.1	133 65 - 135
2-Hexanone			1,2,3,4	1100	µg/Kg	1	950	<10.6	116 53 - 145
trans 1,4-Dichloro-2-butene			1,2,3,4	967	µg/Kg	1	950	<8.49	102 62 - 136
1,1-Dichloroethene	Qs	Qs	1,2,3,4	1660	µg/Kg	1	950	<10.4	175 70 - 131
Methylene chloride	Qs	Qs	1,2,3,4	1490	µg/Kg	1	950	<11.0	157 70 - 128
MTBE	Qs	Qs	1,2,3,4	1420	µg/Kg	1	950	<11.4	149 73 - 125
trans-1,2-Dichloroethene	Qs	Qs	1,2,3,4	1670	µg/Kg	1	950	<9.80	176 74 - 125
1,1-Dichloroethane	Qs	Qs	1,2,3,4	1520	µg/Kg	1	950	<9.82	160 76 - 125
cis-1,2-Dichloroethene	Qs	Qs	1,2,3,4	1640	µg/Kg	1	950	<9.58	173 77 - 123

continued ...

matrix spikes continued ...

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
2,2-Dichloropropane		1,2,3,4	1090	µg/Kg	1	950	<8.99	115	67 - 133
1,2-Dichloroethane (EDC)		1,2,3,4	1190	µg/Kg	1	950	<9.58	125	73 - 128
Chloroform	Qs	Qs	1480	µg/Kg	1	950	<9.68	156	78 - 123
1,1,1-Trichloroethane	Qs	Qs	1290	µg/Kg	1	950	<10.6	136	73 - 130
1,1-Dichloropropene	Qs	Qs	1580	µg/Kg	1	950	<9.74	166	76 - 125
Benzene	Qs	Qs	1550	µg/Kg	1	950	<10.3	163	77 - 121
Carbon Tetrachloride		1,2,3,4	1050	µg/Kg	1	950	<8.88	110	80 - 120
1,2-Dichloropropane	Qs	Qs	1580	µg/Kg	1	950	<9.48	166	76 - 123
Trichloroethene (TCE)	Qs	Qs	2210	µg/Kg	1	950	<10.4	233	77 - 123
Dibromomethane (methylene bromide)	Qs	Qs	1300	µg/Kg	1	950	<9.65	137	78 - 125
Bromodichloromethane		1,2,3,4	1190	µg/Kg	1	950	<9.23	125	75 - 127
2-Chloroethyl vinyl ether	Qs	Qs	1830	µg/Kg	1	950	<10.8	193	43 - 149
cis-1,3-Dichloropropene	Qs	Qs	1310	µg/Kg	1	950	<9.76	138	74 - 126
trans-1,3-Dichloropropene		1,2,3,4	1210	µg/Kg	1	950	<9.24	127	71 - 130
Toluene	Qs	Qs	1630	µg/Kg	1	950	<9.74	172	77 - 121
1,1,2-Trichloroethane	Qs	Qs	1360	µg/Kg	1	950	<11.1	143	78 - 121
1,3-Dichloropropane	Qs	Qs	1390	µg/Kg	1	950	<10.4	146	77 - 121
Dibromochloromethane		1,3,4	1090	µg/Kg	1	950	<9.66	115	74 - 126
1,2-Dibromoethane (EDB)	Qs	Qs	1380	µg/Kg	1	950	<10.8	145	78 - 122
Tetrachloroethene (PCE)	Qs	Qs	2990	µg/Kg	1	950	<6.38	315	73 - 128
Chlorobenzene	Qs	Qs	1730	µg/Kg	1	950	<10.5	182	79 - 120
1,1,1,2-Tetrachloroethane	Qs	Qs	1340	µg/Kg	1	950	<10.2	141	78 - 125
Ethylbenzene	Qs	Qs	1640	µg/Kg	1	950	<10.8	173	76 - 122
m,p-Xylene	Qs	Qs	3320	µg/Kg	1	1900	<11.0	175	77 - 124
Bromoform		1,2,3,4	884	µg/Kg	1	950	<8.43	93	67 - 132
Styrene	Qs	Qs	1640	µg/Kg	1	950	<9.62	173	76 - 124
o-Xylene	Qs	Qs	1640	µg/Kg	1	950	<11.0	173	77 - 123
1,1,2,2-Tetrachloroethane		1,2,3,4	671	µg/Kg	1	950	<10.2	71	70 - 124
2-Chlorotoluene	Qs	Qs	1610	µg/Kg	1	950	<11.5	169	75 - 122
1,2,3-Trichloropropane	Qs	Qs	1210	µg/Kg	1	950	<9.22	127	73 - 125
Isopropylbenzene	Qs	Qs	1680	µg/Kg	1	950	<10.2	177	68 - 134
Bromobenzene	Qs	Qs	1430	µg/Kg	1	950	<11.2	150	78 - 121
n-Propylbenzene	Qs	Qs	1700	µg/Kg	1	950	<10.6	179	73 - 125
1,3,5-Trimethylbenzene	Qs	Qs	1710	µg/Kg	1	950	<11.5	180	73 - 124
tert-Butylbenzene	Qs	Qs	1840	µg/Kg	1	950	<10.3	194	73 - 125
1,2,4-Trimethylbenzene	Qs	Qs	1750	µg/Kg	1	950	<11.0	184	75 - 123
1,4-Dichlorobenzene (para)	Qs	Qs	1800	µg/Kg	1	950	<12.0	189	75 - 120
sec-Butylbenzene	Qs	Qs	1880	µg/Kg	1	950	<11.3	198	73 - 126
1,3-Dichlorobenzene (meta)	Qs	Qs	1810	µg/Kg	1	950	<11.6	190	77 - 121
p-Isopropyltoluene	Qs	Qs	1950	µg/Kg	1	950	<11.1	205	73 - 127
4-Chlorotoluene	Qs	Qs	1540	µg/Kg	1	950	<11.7	162	72 - 124
1,2-Dichlorobenzene (ortho)	Qs	Qs	1670	µg/Kg	1	950	<12.0	176	78 - 121
n-Butylbenzene	Qs	Qs	1950	µg/Kg	1	950	<11.0	205	70 - 128
1,2-Dibromo-3-chloropropane		1,3,4	852	µg/Kg	1	950	<9.07	90	61 - 132

continued ...

matrix spikes continued ...

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,2,3-Trichlorobenzene	Qs	Qs	1,2,3,4	1480	µg/Kg	1	950	<12.6	156 66 - 130
1,2,4-Trichlorobenzene	Qs	Qs	1,2,3,4	1840	µg/Kg	1	950	<12.4	194 67 - 129
Naphthalene	Qs	Qs	1,2,3,4	1260	µg/Kg	1	950	<10.7	133 62 - 129
Hexachlorobutadiene	Qs	Qs	1,2,3,4	2050	µg/Kg	1	950	<17.2	216 31 - 135

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	Qs	Qs	1,2,3,4	1340	µg/Kg	1	960	<9.28	140 78 - 125	20	20
Dichlorodifluoromethane			1,2,3,4	1140	µg/Kg	1	960	<9.82	119 29 - 149	9	20
Chloromethane (methyl chloride)			1,2,3,4	1050	µg/Kg	1	960	<11.7	109 50 - 136	7	20
Vinyl Chloride			1,2,3,4	1190	µg/Kg	1	960	<10.6	124 56 - 135	4	20
Bromomethane (methyl bromide)			1,2,3,4	668	µg/Kg	1	960	<13.5	70 53 - 143	13	20
Chloroethane	Qs	Qs	1,2,3,4	474	µg/Kg	1	960	<9.16	49 59 - 139	16	20
Trichlorofluoromethane			1,2,3,4	1030	µg/Kg	1	960	<12.4	107 62 - 140	9	20
Acetone			1,2,3,4	1210	µg/Kg	1	960	<7.34	126 36 - 164	3	20
Iodomethane (methyl iodide)	Qs	Qs	1,2,3,4	1340	µg/Kg	1	960	<8.64	140 71 - 131	19	20
Carbon Disulfide	Qr	Qr	1,2,3,4	1180	µg/Kg	1	960	<9.90	123 63 - 132	23	20
Acrylonitrile	Qr	Qr	1,2,3,4	1080	µg/Kg	1	960	<9.14	112 65 - 134	23	20
2-Butanone (MEK)			1,2,3,4	1140	µg/Kg	1	960	<13.4	119 51 - 148	14	20
4-Methyl-2-pentanone (MIBK)	Qr	Qr	1,2,3,4	1000	µg/Kg	1	960	<14.1	104 65 - 135	23	20
2-Hexanone			1,2,3,4	953	µg/Kg	1	960	<10.6	99 53 - 145	14	20
trans 1,4-Dichloro-2-butene	Qr	Qr	1,2,3,4	790	µg/Kg	1	960	<8.49	82 62 - 136	20	20
1,1-Dichloroethene	Qr,Qs	Qr,Qs	1,2,3,4	1330	µg/Kg	1	960	<10.4	138 70 - 131	22	20
Methylene chloride	Qs	Qs	1,2,3,4	1230	µg/Kg	1	960	<11.0	128 70 - 128	19	20
MTBE	Qr	Qr	1,2,3,4	1120	µg/Kg	1	960	<11.4	117 73 - 125	24	20
trans-1,2-Dichloroethene	Qr,Qs	Qr,Qs	1,2,3,4	1340	µg/Kg	1	960	<9.80	140 74 - 125	22	20
1,1-Dichloroethane	Qr,Qs	Qr,Qs	1,2,3,4	1210	µg/Kg	1	960	<9.82	126 76 - 125	23	20
cis-1,2-Dichloroethene	Qr,Qs	Qr,Qs	1,2,3,4	1330	µg/Kg	1	960	<9.58	138 77 - 123	21	20
2,2-Dichloropropane	Qr	Qr	1,2,3,4	875	µg/Kg	1	960	<8.99	91 67 - 133	22	20
1,2-Dichloroethane (EDC)	Qr	Qr	1,2,3,4	960	µg/Kg	1	960	<9.58	100 73 - 128	21	20
Chloroform	Qr	Qr	1,2,3,4	1180	µg/Kg	1	960	<9.68	123 78 - 123	23	20
1,1,1-Trichloroethane	Qr	Qr	1,2,3,4	1020	µg/Kg	1	960	<10.6	106 73 - 130	23	20
1,1-Dichloropropene	Qr,Qs	Qr,Qs	1,2,3,4	1240	µg/Kg	1	960	<9.74	129 76 - 125	24	20
Benzene	Qs	Qs	1,2,3,4	1290	µg/Kg	1	960	<10.3	134 77 - 121	18	20
Carbon Tetrachloride	Qr	Qr	1,2,3,4	838	µg/Kg	1	960	<8.88	87 80 - 120	22	20
1,2-Dichloropropane	Qs	Qs	1,2,3,4	1380	µg/Kg	1	960	<9.48	144 76 - 123	14	20
Trichloroethene (TCE)	Qs	Qs	1,2,3,4	1970	µg/Kg	1	960	<10.4	205 77 - 123	12	20
Dibromomethane (methylene bromide)			1,2,3,4	1120	µg/Kg	1	960	<9.65	117 78 - 125	15	20
Bromodichloromethane			1,2,3,4	1020	µg/Kg	1	960	<9.23	106 75 - 127	15	20
2-Chloroethyl vinyl ether	Qs	Qs	1,2,3,4	1590	µg/Kg	1	960	<10.8	166 43 - 149	14	20
cis-1,3-Dichloropropene			1,2,3,4	1110	µg/Kg	1	960	<9.76	116 74 - 126	16	20
trans-1,3-Dichloropropene			1,2,3,4	1020	µg/Kg	1	960	<9.24	106 71 - 130	17	20
Toluene	Qs	Qs	1,2,3,4	1350	µg/Kg	1	960	<9.74	141 77 - 121	19	20

continued ...

matrix spikes continued ...

Param			MSD		Dil.	Spike Amount	Matrix Result	Rec.		RPD	Limit
	F	C	Result	Units				Rec.	Limit		
1,1,2-Trichloroethane			1,2,3,4 1140	µg/Kg	1	960	<11.1	119	78 - 121	18	20
1,3-Dichloropropane	Q _s	Q _s	1,2,3,4 1170	µg/Kg	1	960	<10.4	122	77 - 121	17	20
Dibromochloromethane	Q _r	Q _r	1,3,4 873	µg/Kg	1	960	<9.66	91	74 - 126	22	20
1,2-Dibromoethane (EDB)			1,2,3,4 1150	µg/Kg	1	960	<10.8	120	78 - 122	18	20
Tetrachloroethene (PCE)	Q _r , Q _s	Q _r , Q _s	1,2,3,4 2380	µg/Kg	1	960	<6.38	248	73 - 128	23	20
Chlorobenzene	Q _s	Q _s	1,2,3,4 1420	µg/Kg	1	960	<10.5	148	79 - 120	20	20
1,1,1,2-Tetrachloroethane	Q _r	Q _r	1,2,3,4 1090	µg/Kg	1	960	<10.2	114	78 - 125	21	20
Ethylbenzene	Q _s	Q _s	1,2,3,4 1360	µg/Kg	1	960	<10.8	142	76 - 122	19	20
m,p-Xylene	Q _s	Q _s	1,2,3,4 2740	µg/Kg	1	1920	<11.0	143	77 - 124	19	20
Bromoform	Q _r	Q _r	1,2,3,4 670	µg/Kg	1	960	<8.43	70	67 - 132	28	20
Styrene	Q _r , Q _s	Q _r , Q _s	1,2,3,4 1320	µg/Kg	1	960	<9.62	138	76 - 124	22	20
o-Xylene	Q _s	Q _s	1,2,3,4 1350	µg/Kg	1	960	<11.0	141	77 - 123	19	20
1,1,2,2-Tetrachloroethane	Q _r , Q _s	Q _r , Q _s	1,2,3,4 397	µg/Kg	1	960	<10.2	41	70 - 124	51	20
2-Chlorotoluene	Q _s	Q _s	1,2,3,4 1370	µg/Kg	1	960	<11.5	143	75 - 122	16	20
1,2,3-Trichloropropane			1,2,3,4 1020	µg/Kg	1	960	<9.22	106	73 - 125	17	20
Isopropylbenzene	Q _s	Q _s	1,2,3,4 1410	µg/Kg	1	960	<10.2	147	68 - 134	18	20
Bromobenzene	Q _s	Q _s	1,2,3,4 1220	µg/Kg	1	960	<11.2	127	78 - 121	16	20
n-Propylbenzene	Q _s	Q _s	1,2,3,4 1440	µg/Kg	1	960	<10.6	150	73 - 125	17	20
1,3,5-Trimethylbenzene	Q _s	Q _s	1,2,3,4 1460	µg/Kg	1	960	<11.5	152	73 - 124	16	20
tert-Butylbenzene	Q _s	Q _s	1,2,3,4 1520	µg/Kg	1	960	<10.3	158	73 - 125	19	20
1,2,4-Trimethylbenzene	Q _s	Q _s	1,2,3,4 1460	µg/Kg	1	960	<11.0	152	75 - 123	18	20
1,4-Dichlorobenzene (para)	Q _r , Q _s	Q _r , Q _s	1,2,3,4 1450	µg/Kg	1	960	<12.0	151	75 - 120	22	20
sec-Butylbenzene	Q _s	Q _s	1,2,3,4 1570	µg/Kg	1	960	<11.3	164	73 - 126	18	20
1,3-Dichlorobenzene (meta)	Q _s	Q _s	1,2,3,4 1490	µg/Kg	1	960	<11.6	155	77 - 121	19	20
p-Isopropyltoluene	Q _s	Q _s	1,2,3 1610	µg/Kg	1	960	<11.1	168	73 - 127	19	20
4-Chlorotoluene	Q _s	Q _s	1,2,3,4 1350	µg/Kg	1	960	<11.7	141	72 - 124	13	20
1,2-Dichlorobenzene (ortho)	Q _r , Q _s	Q _r , Q _s	1,2,3,4 1350	µg/Kg	1	960	<12.0	141	78 - 121	21	20
n-Butylbenzene	Q _s	Q _s	1,2,3,4 1640	µg/Kg	1	960	<11.0	171	70 - 128	17	20
1,2-Dibromo-3-chloropropane	Q _r	Q _r	1,3,4 623	µg/Kg	1	960	<9.07	65	61 - 132	31	20
1,2,3-Trichlorobenzene	Q _s	Q _s	1,2,3,4 1480	µg/Kg	1	960	<12.6	154	66 - 130	0	20
1,2,4-Trichlorobenzene	Q _s	Q _s	1,2,3,4 1600	µg/Kg	1	960	<12.4	167	67 - 129	14	20
Naphthalene	Q _s	Q _s	1,2,3,4 1260	µg/Kg	1	960	<10.7	131	62 - 129	0	20
Hexachlorobutadiene	Q _s	Q _s	1,2,3,4 1710	µg/Kg	1	960	<17.2	178	31 - 135	18	20

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

Surrogate			MS	MSD	Dil.	Spike Amount	MS	MSD	Rec. Limit
			Result	Result			Rec.	Rec.	
Dibromofluoromethane	4		839	818	1	950	88	85	78 - 119
Toluene-d8			897	944	1	950	94	98	85 - 116
4-Bromofluorobenzene (4-BFB)			859	866	1	950	90	90	79 - 119

Report Date: August 2, 2016
Lovington Leak

Work Order: 16072912
Lovington Leak

Page Number: 38 of 44

Matrix Spike (MS-1) Spiked Sample:

QC Batch: 131830
Prep Batch: 111719

Date Analyzed: 2016-08-01
QC Preparation: 2016-08-01

Analyzed By: HJ
Prepared By: HJ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3	436	mg/Kg	1	500	<8.47	87	49.3 - 138

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	487	mg/Kg	1	500	<8.47	97	49.3 - 138	11	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	26.1	28.1	mg/Kg	1	25	104	112	58.2 - 150

Calibration Standards

Standard (CCV-1)

QC Batch: 131801

Date Analyzed: 2016-08-01

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/Kg	500	410	82	80 - 120	2016-08-01

Standard (CCV-2)

QC Batch: 131801

Date Analyzed: 2016-08-01

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/Kg	500	417	83	80 - 120	2016-08-01

Standard (CCV-1)

QC Batch: 131808

Date Analyzed: 2016-07-29

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/Kg	1.00	1.08	108	80 - 120	2016-07-29

Standard (CCV-2)

QC Batch: 131808

Date Analyzed: 2016-07-29

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/Kg	1.00	0.878	88	80 - 120	2016-07-29

Report Date: August 2, 2016
Lovington Leak

Work Order: 16072912
Lovington Leak

Page Number: 40 of 44

Standard (CCV-1)

QC Batch: 131816

Date Analyzed: 2016-07-29

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4	mg/Kg	25.0	24.7	99	90 - 110	2016-07-29

Standard (CCV-2)

QC Batch: 131816

Date Analyzed: 2016-07-29

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4	mg/Kg	25.0	24.6	98	90 - 110	2016-07-29

Standard (CCV-1)

QC Batch: 131821

Date Analyzed: 2016-07-29

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 $\mu\text{g/Kg}$	50.0	51.5	103	80 - 120	2016-07-29
Dichlorodifluoromethane			1,2,3,4 $\mu\text{g/Kg}$	50.0	45.2	90	80 - 120	2016-07-29
Chloromethane (methyl chloride)			1,2,3,4 $\mu\text{g/Kg}$	50.0	41.1	82	80 - 120	2016-07-29
Vinyl Chloride			1,2,3,4 $\mu\text{g/Kg}$	50.0	43.3	87	80 - 120	2016-07-29
Bromomethane (methyl bromide)			1,2,3,4 $\mu\text{g/Kg}$	50.0	41.4	83	80 - 120	2016-07-29
Chloroethane			1,2,3,4 $\mu\text{g/Kg}$	50.0	44.6	89	80 - 120	2016-07-29
Trichlorofluoromethane			1,2,3,4 $\mu\text{g/Kg}$	50.0	45.9	92	80 - 120	2016-07-29
Acetone	Qc	Qc	1,2,3,4 $\mu\text{g/Kg}$	50.0	35.8	72	80 - 120	2016-07-29
Iodomethane (methyl iodide)			1,2,3,4 $\mu\text{g/Kg}$	50.0	49.5	99	80 - 120	2016-07-29
Carbon Disulfide			1,2,3,4 $\mu\text{g/Kg}$	50.0	49.7	99	80 - 120	2016-07-29
Acrylonitrile			1,2,3,4 $\mu\text{g/Kg}$	50.0	45.7	91	80 - 120	2016-07-29
2-Butanone (MEK)	Qc	Qc	1,2,3,4 $\mu\text{g/Kg}$	50.0	39.4	79	80 - 120	2016-07-29
4-Methyl-2-pentanone (MIBK)			1,2,3,4 $\mu\text{g/Kg}$	50.0	40.2	80	80 - 120	2016-07-29
2-Hexanone	Qc	Qc	1,2,3,4 $\mu\text{g/Kg}$	50.0	38.2	76	80 - 120	2016-07-29
trans 1,4-Dichloro-2-butene	Qc	Qc	1,2,3,4 $\mu\text{g/Kg}$	50.0	66.8	134	80 - 120	2016-07-29
1,1-Dichloroethene			1,2,3,4 $\mu\text{g/Kg}$	50.0	49.3	99	80 - 120	2016-07-29
Methylene chloride			1,2,3,4 $\mu\text{g/Kg}$	50.0	46.8	94	80 - 120	2016-07-29
MTBE			1,2,3,4 $\mu\text{g/Kg}$	50.0	47.8	96	80 - 120	2016-07-29

continued ...

standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
trans-1,2-Dichloroethene		1,2,3,4	µg/Kg	50.0	50.2	100	80 - 120	2016-07-29
1,1-Dichloroethane		1,2,3,4	µg/Kg	50.0	49.0	98	80 - 120	2016-07-29
cis-1,2-Dichloroethene		1,2,3,4	µg/Kg	50.0	49.0	98	80 - 120	2016-07-29
2,2-Dichloropropane		1,2,3,4	µg/Kg	50.0	53.1	106	80 - 120	2016-07-29
1,2-Dichloroethane (EDC)		1,2,3,4	µg/Kg	50.0	51.1	102	80 - 120	2016-07-29
Chloroform		1,2,3,4	µg/Kg	50.0	51.4	103	80 - 120	2016-07-29
1,1,1-Trichloroethane		1,2,3,4	µg/Kg	50.0	53.8	108	80 - 120	2016-07-29
1,1-Dichloropropene		1,2,3,4	µg/Kg	50.0	52.4	105	80 - 120	2016-07-29
Benzene		1,2,3,4	µg/Kg	50.0	50.1	100	80 - 120	2016-07-29
Carbon Tetrachloride		1,2,3,4	µg/Kg	50.0	53.8	108	80 - 120	2016-07-29
1,2-Dichloropropane		1,2,3,4	µg/Kg	50.0	52.4	105	80 - 120	2016-07-29
Trichloroethene (TCE)		1,2,3,4	µg/Kg	50.0	48.3	97	80 - 120	2016-07-29
Dibromomethane (methylene bromide)		1,2,3,4	µg/Kg	50.0	47.9	96	80 - 120	2016-07-29
Bromodichloromethane		1,2,3,4	µg/Kg	50.0	53.3	107	80 - 120	2016-07-29
2-Chloroethyl vinyl ether		1,2,3,4	µg/Kg	50.0	51.4	103	80 - 120	2016-07-29
cis-1,3-Dichloropropene		1,2,3,4	µg/Kg	50.0	49.3	99	80 - 120	2016-07-29
trans-1,3-Dichloropropene		1,2,3,4	µg/Kg	50.0	49.8	100	80 - 120	2016-07-29
Toluene		1,2,3,4	µg/Kg	50.0	50.8	102	80 - 120	2016-07-29
1,1,2-Trichloroethane		1,2,3,4	µg/Kg	50.0	48.0	96	80 - 120	2016-07-29
1,3-Dichloropropane		1,2,3,4	µg/Kg	50.0	49.9	100	80 - 120	2016-07-29
Dibromochloromethane		1,3,4	µg/Kg	50.0	51.8	104	80 - 120	2016-07-29
1,2-Dibromoethane (EDB)		1,2,3,4	µg/Kg	50.0	48.1	96	80 - 120	2016-07-29
Tetrachloroethene (PCE)		1,2,3,4	µg/Kg	50.0	47.6	95	80 - 120	2016-07-29
Chlorobenzene		1,2,3,4	µg/Kg	50.0	52.6	105	80 - 120	2016-07-29
1,1,1,2-Tetrachloroethane		1,2,3,4	µg/Kg	50.0	53.8	108	80 - 120	2016-07-29
Ethylbenzene		1,2,3,4	µg/Kg	50.0	52.4	105	80 - 120	2016-07-29
m,p-Xylene		1,2,3,4	µg/Kg	100	107	107	80 - 120	2016-07-29
Bromoform		1,2,3,4	µg/Kg	50.0	52.4	105	80 - 120	2016-07-29
Styrene		1,2,3,4	µg/Kg	50.0	50.8	102	80 - 120	2016-07-29
o-Xylene		1,2,3,4	µg/Kg	50.0	54.3	109	80 - 120	2016-07-29
1,1,2,2-Tetrachloroethane		1,2,3,4	µg/Kg	50.0	46.6	93	80 - 120	2016-07-29
2-Chlorotoluene		1,2,3,4	µg/Kg	50.0	50.5	101	80 - 120	2016-07-29
1,2,3-Trichloropropane		1,2,3,4	µg/Kg	50.0	48.5	97	80 - 120	2016-07-29
Isopropylbenzene		1,2,3,4	µg/Kg	50.0	49.2	98	80 - 120	2016-07-29
Bromobenzene		1,2,3,4	µg/Kg	50.0	49.2	98	80 - 120	2016-07-29
n-Propylbenzene		1,2,3,4	µg/Kg	50.0	49.4	99	80 - 120	2016-07-29
1,3,5-Trimethylbenzene		1,2,3,4	µg/Kg	50.0	50.7	101	80 - 120	2016-07-29
tert-Butylbenzene		1,2,3,4	µg/Kg	50.0	49.6	99	80 - 120	2016-07-29
1,2,4-Trimethylbenzene		1,2,3,4	µg/Kg	50.0	50.8	102	80 - 120	2016-07-29
1,4-Dichlorobenzene (para)		1,2,3,4	µg/Kg	50.0	51.3	103	80 - 120	2016-07-29
sec-Butylbenzene		1,2,3,4	µg/Kg	50.0	50.2	100	80 - 120	2016-07-29
1,3-Dichlorobenzene (meta)		1,2,3,4	µg/Kg	50.0	50.9	102	80 - 120	2016-07-29
p-Isopropyltoluene		1,2,3	µg/Kg	50.0	49.9	100	80 - 120	2016-07-29

continued ...

standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
4-Chlorotoluene		1,2,3,4	µg/Kg	50.0	49.6	99	80 - 120	2016-07-29
1,2-Dichlorobenzene (ortho)		1,2,3,4	µg/Kg	50.0	50.1	100	80 - 120	2016-07-29
n-Butylbenzene		1,2,3,4	µg/Kg	50.0	50.7	101	80 - 120	2016-07-29
1,2-Dibromo-3-chloropropane		1,3,4	µg/Kg	50.0	43.7	87	80 - 120	2016-07-29
1,2,3-Trichlorobenzene		1,2,3,4	µg/Kg	50.0	42.3	85	80 - 120	2016-07-29
1,2,4-Trichlorobenzene		1,2,3,4	µg/Kg	50.0	48.7	97	80 - 120	2016-07-29
Naphthalene		1,2,3,4	µg/Kg	50.0	43.1	86	80 - 120	2016-07-29
Hexachlorobutadiene		1,2,3,4	µg/Kg	50.0	48.4	97	80 - 120	2016-07-29

Standard (CCV-1)

QC Batch: 131830

Date Analyzed: 2016-08-01

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/Kg	500	431	86	80 - 120	2016-08-01

Standard (CCV-2)

QC Batch: 131830

Date Analyzed: 2016-08-01

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/Kg	500	430	86	80 - 120	2016-08-01

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.

