



Certifications

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Analytical and Quality Control Report

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Report Date: August 17, 2016

Work Order: 16081207



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
426313	Rupture #7 Release	water	2016-08-09	10:00	2016-08-11
426316	Rupture #8 Release	water	2016-08-11	09:30	2016-08-11

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 34 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 426313 (Rupture #7 Release)	5
Sample 426316 (Rupture #8 Release)	8
Method Blanks	11
QC Batch 132100 - Method Blank (1)	11
QC Batch 132122 - Method Blank (1)	11
QC Batch 132123 - Method Blank (1)	11
QC Batch 132127 - Method Blank (1)	11
QC Batch 132144 - Method Blank (1)	12
Laboratory Control Spikes	15
QC Batch 132100 - LCS (1)	15
QC Batch 132122 - LCS (1)	15
QC Batch 132123 - LCS (1)	15
QC Batch 132127 - LCS (1)	16
QC Batch 132144 - LCS (1)	16
Matrix Spikes	21
QC Batch 132100 - MS (1)	21
QC Batch 132122 - MS (1)	21
QC Batch 132123 - MS (1)	21
QC Batch 132127 - MS (1)	22
QC Batch 132144 - MS (1)	22
Calibration Standards	27
QC Batch 132100 - CCV (1)	27
QC Batch 132100 - CCV (2)	27
QC Batch 132122 - CCV (1)	27
QC Batch 132122 - CCV (2)	27
QC Batch 132123 - CCV (1)	27
QC Batch 132123 - CCV (2)	28
QC Batch 132127 - CCV (1)	28
QC Batch 132127 - CCV (2)	28
QC Batch 132144 - CCV (1)	28
QC Batch 132144 - CCV (2)	30
Appendix	33
Report Definitions	33
Laboratory Certifications	33
Standard Flags	33
Attachments	33

Case Narrative

Samples for project EPNG Line 3031 Spike Test were received by TraceAnalysis, Inc. on 2016-08-11 and assigned to work order 16081207. Samples for work order 16081207 were received intact at a temperature of 29.0 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	111971	2016-08-15 at 09:00	132122	2016-08-15 at 09:36
Chloride (IC)	E 300.0	111972	2016-08-15 at 09:00	132123	2016-08-15 at 09:36
TPH DRO	S 8015 D	111970	2016-08-15 at 13:00	132127	2016-08-16 at 09:03
TPH GRO	S 8015 D	111947	2016-08-12 at 16:15	132100	2016-08-12 at 16:15
Volatiles	S 8260 C	111988	2016-08-15 at 12:00	132144	2016-08-15 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 16081207 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: 426313 - Rupture #7 Release

Laboratory: Lubbock
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 132122 Date Analyzed: 2016-08-15 Analyzed By: RL
Prep Batch: 111971 Sample Preparation: 2016-08-15 Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,3,4	82.1	mg/L	5	2.50

Sample: 426313 - Rupture #7 Release

Laboratory: Lubbock
Analysis: TPH DRO Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 132127 Date Analyzed: 2016-08-16 Analyzed By: HJ
Prep Batch: 111970 Sample Preparation: 2016-08-15 Prepared By: HJ

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			3.08	mg/L	1	2.50	123	70 - 130

Sample: 426313 - Rupture #7 Release

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5030B
QC Batch: 132100 Date Analyzed: 2016-08-12 Analyzed By: MT
Prep Batch: 111947 Sample Preparation: 2016-08-12 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3	6.36	mg/L	10	0.200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.23	mg/L	10	1.00	123	72.8 - 136

continued ...

Report Date: August 17, 2016
AFE 403828

Work Order: 16081207
EPNG Line 3031 Spike Test

Page Number: 6 of 34
Lea County, NM

sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)	Q _{sr}	Q _{sr}	1.37	mg/L	10	1.00	137	73.3 - 120

Sample: 426313 - Rupture #7 Release

Laboratory: Lubbock
Analysis: Volatiles
QC Batch: 132144
Prep Batch: 111988

Analytical Method: S 8260 C
Date Analyzed: 2016-08-15
Sample Preparation: 2016-08-15

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Bromochloromethane	U	1,2,3,4	<5.00	µg/L	5	1.00
Dichlorodifluoromethane	Qc, Qr, U	1,2,3,4	<5.00	µg/L	5	1.00
Chloromethane (methyl chloride)	U	1,2,3,4	<5.00	µg/L	5	1.00
Vinyl Chloride	U	1,2,3,4	<5.00	µg/L	5	1.00
Bromomethane (methyl bromide)	U	1,2,3,4	<25.0	µg/L	5	5.00
Chloroethane	U	1,2,3,4	<5.00	µg/L	5	1.00
Trichlorofluoromethane	U	1,2,3,4	<5.00	µg/L	5	1.00
Acetone	Qc, U	1,2,3,4	<50.0	µg/L	5	10.0
Iodomethane (methyl iodide)	U	1,2,3,4	<25.0	µg/L	5	5.00
Carbon Disulfide		1,2,3,4	18.4	µg/L	5	1.00
Acrylonitrile	U	1,2,3,4	<5.00	µg/L	5	1.00
2-Butanone (MEK)	Qc, Qr, U	1,2,3,4	<25.0	µg/L	5	5.00
4-Methyl-2-pentanone (MIBK)	U	1,2,3,4	<25.0	µg/L	5	5.00
2-Hexanone	Qc, U	1,2,3,4	<25.0	µg/L	5	5.00
trans 1,4-Dichloro-2-butene	Qc, U	1,2,3,4	<50.0	µg/L	5	10.0
1,1-Dichloroethene	U	1,2,3,4	<5.00	µg/L	5	1.00
Methylene chloride	U	1,2,3,4	<25.0	µg/L	5	5.00
MTBE	U	1,2,3,4	<5.00	µg/L	5	1.00
trans-1,2-Dichloroethene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,1-Dichloroethane	U	1,2,3,4	<5.00	µg/L	5	1.00
cis-1,2-Dichloroethene	U	1,2,3,4	<5.00	µg/L	5	1.00
2,2-Dichloropropane	Qc, U	1,2,3,4	<5.00	µg/L	5	1.00
1,2-Dichloroethane (EDC)	U	1,2,3,4	<5.00	µg/L	5	1.00
Chloroform	U	1,2,3,4	<5.00	µg/L	5	1.00
1,1,1-Trichloroethane	U	1,2,3,4	<5.00	µg/L	5	1.00
1,1-Dichloropropene	U	1,2,3,4	<5.00	µg/L	5	1.00
Benzene		1,2,3,4	37.2	µg/L	5	1.00
Carbon Tetrachloride	U	1,2,3,4	<5.00	µg/L	5	1.00
1,2-Dichloropropane	U	1,2,3,4	<5.00	µg/L	5	1.00
Trichloroethene (TCE)	U	1,2,3,4	<5.00	µg/L	5	1.00
Dibromomethane (methylene bromide)	U	1,2,3,4	<5.00	µg/L	5	1.00
Bromodichloromethane	U	1,2,3,4	<5.00	µg/L	5	1.00

continued ...

sample 426313 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
2-Chloroethyl vinyl ether	U	1,2,3,4	<25.0	µg/L	5	5.00
cis-1,3-Dichloropropene	U	1,2,3,4	<5.00	µg/L	5	1.00
trans-1,3-Dichloropropene	U	1,2,3,4	<5.00	µg/L	5	1.00
Toluene		1,2,3,4	6.81	µg/L	5	1.00
1,1,2-Trichloroethane	U	1,2,3,4	<5.00	µg/L	5	1.00
1,3-Dichloropropane	U	1,2,3,4	<5.00	µg/L	5	1.00
Dibromochloromethane	U	1,3,4	<5.00	µg/L	5	1.00
1,2-Dibromoethane (EDB)	U	1,2,3,4	<5.00	µg/L	5	1.00
Tetrachloroethene (PCE)	U	1,2,3,4	<5.00	µg/L	5	1.00
Chlorobenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,1,1,2-Tetrachloroethane	U	1,2,3,4	<5.00	µg/L	5	1.00
Ethylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
m,p-Xylene	U	1,2,3,4	<5.00	µg/L	5	1.00
Bromoform	U	1,2,3,4	<5.00	µg/L	5	1.00
Styrene	U	1,2,3,4	<5.00	µg/L	5	1.00
o-Xylene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,1,2,2-Tetrachloroethane	U	1,2,3,4	<5.00	µg/L	5	1.00
2-Chlorotoluene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,2,3-Trichloropropane	U	1,2,3,4	<5.00	µg/L	5	1.00
Isopropylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
Bromobenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
n-Propylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,3,5-Trimethylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
tert-Butylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,2,4-Trimethylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,4-Dichlorobenzene (para)	U	1,2,3,4	<5.00	µg/L	5	1.00
sec-Butylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,3-Dichlorobenzene (meta)	U	1,2,3,4	<5.00	µg/L	5	1.00
p-Isopropyltoluene	U	1,2,3	<5.00	µg/L	5	1.00
4-Chlorotoluene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,2-Dichlorobenzene (ortho)	U	1,2,3,4	<5.00	µg/L	5	1.00
n-Butylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,2-Dibromo-3-chloropropane	U	1,3	<25.0	µg/L	5	5.00
1,2,3-Trichlorobenzene	U	1,2,3,4	<25.0	µg/L	5	5.00
1,2,4-Trichlorobenzene	U	1,2,3,4	<25.0	µg/L	5	5.00
Naphthalene	U	1,2,3,4	<25.0	µg/L	5	5.00
Hexachlorobutadiene	U	1,2,3,4	<25.0	µg/L	5	5.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane			268	µg/L	5	250	107	70 - 130
Toluene-d8			233	µg/L	5	250	93	70 - 130
4-Bromofluorobenzene (4-BFB)			249	µg/L	5	250	100	70 - 130

Report Date: August 17, 2016
AFE 403828

Work Order: 16081207
EPNG Line 3031 Spike Test

Page Number: 8 of 34
Lea County, NM

Sample: 426316 - Rupture #8 Release

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-08-15	Analyzed By:	RL
QC Batch:	132123	Sample Preparation:	2016-08-15	Prepared By:	RL
Prep Batch:	111972				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,3,4	94.1	mg/L	5	2.50

Sample: 426316 - Rupture #8 Release

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-08-16	Analyzed By:	HJ
QC Batch:	132127	Sample Preparation:	2016-08-15	Prepared By:	HJ
Prep Batch:	111970				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			2.95	mg/L	1	2.50	118	70 - 130

Sample: 426316 - Rupture #8 Release

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5030B
Analysis:	TPH GRO	Date Analyzed:	2016-08-12	Analyzed By:	MT
QC Batch:	132100	Sample Preparation:	2016-08-12	Prepared By:	MT
Prep Batch:	111947				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3	6.13	mg/L	10	0.200

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)	Q _{sr}	Q _{sr}	1.34	mg/L	10	1.00	134	73.3 - 120

Sample: 426316 - Rupture #8 Release

Laboratory: Lubbock

Analysis: Volatiles

QC Batch: 132144

Prep Batch: 111988

Analytical Method: S 8260 C

Date Analyzed: 2016-08-15

Sample Preparation: 2016-08-15

Prep Method: S 5030B

Analyzed By: KB

Prepared By: KB

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Bromochloromethane	U	1,2,3,4	<5.00	µg/L	5	1.00
Dichlorodifluoromethane	Qc,Qr,U	1,2,3,4	<5.00	µg/L	5	1.00
Chloromethane (methyl chloride)	U	1,2,3,4	<5.00	µg/L	5	1.00
Vinyl Chloride	U	1,2,3,4	<5.00	µg/L	5	1.00
Bromomethane (methyl bromide)	U	1,2,3,4	<25.0	µg/L	5	5.00
Chloroethane	U	1,2,3,4	<5.00	µg/L	5	1.00
Trichlorofluoromethane	U	1,2,3,4	<5.00	µg/L	5	1.00
Acetone	Qc,U	1,2,3,4	<50.0	µg/L	5	10.0
Iodomethane (methyl iodide)	U	1,2,3,4	<25.0	µg/L	5	5.00
Carbon Disulfide		1,2,3,4	16.1	µg/L	5	1.00
Acrylonitrile	U	1,2,3,4	<5.00	µg/L	5	1.00
2-Butanone (MEK)	Qc,Qr,U	1,2,3,4	<25.0	µg/L	5	5.00
4-Methyl-2-pentanone (MIBK)	U	1,2,3,4	<25.0	µg/L	5	5.00
2-Hexanone	Qc,U	1,2,3,4	<25.0	µg/L	5	5.00
trans 1,4-Dichloro-2-butene	Qc,U	1,2,3,4	<50.0	µg/L	5	10.0
1,1-Dichloroethene	U	1,2,3,4	<5.00	µg/L	5	1.00
Methylene chloride	U	1,2,3,4	<25.0	µg/L	5	5.00
MTBE	U	1,2,3,4	<5.00	µg/L	5	1.00
trans-1,2-Dichloroethene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,1-Dichloroethane	U	1,2,3,4	<5.00	µg/L	5	1.00
cis-1,2-Dichloroethene	U	1,2,3,4	<5.00	µg/L	5	1.00
2,2-Dichloropropane	Qc,U	1,2,3,4	<5.00	µg/L	5	1.00
1,2-Dichloroethane (EDC)	U	1,2,3,4	<5.00	µg/L	5	1.00
Chloroform	U	1,2,3,4	<5.00	µg/L	5	1.00
1,1,1-Trichloroethane	U	1,2,3,4	<5.00	µg/L	5	1.00
1,1-Dichloropropene	U	1,2,3,4	<5.00	µg/L	5	1.00
Benzene		1,2,3,4	32.9	µg/L	5	1.00
Carbon Tetrachloride	U	1,2,3,4	<5.00	µg/L	5	1.00
1,2-Dichloropropane	U	1,2,3,4	<5.00	µg/L	5	1.00
Trichloroethene (TCE)	U	1,2,3,4	<5.00	µg/L	5	1.00
Dibromomethane (methylene bromide)	U	1,2,3,4	<5.00	µg/L	5	1.00
Bromodichloromethane	U	1,2,3,4	<5.00	µg/L	5	1.00
2-Chloroethyl vinyl ether	U	1,2,3,4	<25.0	µg/L	5	5.00
cis-1,3-Dichloropropene	U	1,2,3,4	<5.00	µg/L	5	1.00
trans-1,3-Dichloropropene	U	1,2,3,4	<5.00	µg/L	5	1.00
Toluene		1,2,3,4	6.75	µg/L	5	1.00
1,1,2-Trichloroethane	U	1,2,3,4	<5.00	µg/L	5	1.00
1,3-Dichloropropane	U	1,2,3,4	<5.00	µg/L	5	1.00
Dibromochloromethane	U	1,3,4	<5.00	µg/L	5	1.00

continued ...

sample 426316 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
1,2-Dibromoethane (EDB)	U	1,2,3,4	<5.00	µg/L	5	1.00
Tetrachloroethene (PCE)	U	1,2,3,4	<5.00	µg/L	5	1.00
Chlorobenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,1,1,2-Tetrachloroethane	U	1,2,3,4	<5.00	µg/L	5	1.00
Ethylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
m,p-Xylene	U	1,2,3,4	<5.00	µg/L	5	1.00
Bromoform	U	1,2,3,4	<5.00	µg/L	5	1.00
Styrene	U	1,2,3,4	<5.00	µg/L	5	1.00
o-Xylene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,1,2,2-Tetrachloroethane	U	1,2,3,4	<5.00	µg/L	5	1.00
2-Chlorotoluene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,2,3-Trichloropropane	U	1,2,3,4	<5.00	µg/L	5	1.00
Isopropylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
Bromobenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
n-Propylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,3,5-Trimethylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
tert-Butylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,2,4-Trimethylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,4-Dichlorobenzene (para)	U	1,2,3,4	<5.00	µg/L	5	1.00
sec-Butylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,3-Dichlorobenzene (meta)	U	1,2,3,4	<5.00	µg/L	5	1.00
p-Isopropyltoluene	U	1,2,3	<5.00	µg/L	5	1.00
4-Chlorotoluene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,2-Dichlorobenzene (ortho)	U	1,2,3,4	<5.00	µg/L	5	1.00
n-Butylbenzene	U	1,2,3,4	<5.00	µg/L	5	1.00
1,2-Dibromo-3-chloropropane	U	1,3	<25.0	µg/L	5	5.00
1,2,3-Trichlorobenzene	U	1,2,3,4	<25.0	µg/L	5	5.00
1,2,4-Trichlorobenzene	U	1,2,3,4	<25.0	µg/L	5	5.00
Naphthalene	U	1,2,3,4	<25.0	µg/L	5	5.00
Hexachlorobutadiene	U	1,2,3,4	<25.0	µg/L	5	5.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane			261	µg/L	5	250	104	70 - 130
Toluene-d8			242	µg/L	5	250	97	70 - 130
4-Bromofluorobenzene (4-BFB)			251	µg/L	5	250	100	70 - 130

Method Blanks

Method Blank (1) QC Batch: 132100

QC Batch: 132100 Date Analyzed: 2016-08-12 Analyzed By: MT
Prep Batch: 111947 QC Preparation: 2016-08-12 Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1,2,3	<0.0369	mg/L	0.2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.119	mg/L	1	0.100	119	72.8 - 136
4-Bromofluorobenzene (4-BFB)			0.102	mg/L	1	0.100	102	73.3 - 120

Method Blank (1) QC Batch: 132122

QC Batch: 132122 Date Analyzed: 2016-08-15 Analyzed By: RL
Prep Batch: 111971 QC Preparation: 2016-08-15 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: 132123

QC Batch: 132123 Date Analyzed: 2016-08-15 Analyzed By: RL
Prep Batch: 111972 QC Preparation: 2016-08-15 Prepared By: RL

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

Report Date: August 17, 2016
AFE 403828

Work Order: 16081207
EPNG Line 3031 Spike Test

Page Number: 12 of 34
Lea County, NM

Method Blank (1) QC Batch: 132127

QC Batch: 132127
Prep Batch: 111970

Date Analyzed: 2016-08-16
QC Preparation: 2016-08-15

Analyzed By: HJ
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			2.82	mg/L	1	2.50	113	70 - 130

Method Blank (1) QC Batch: 132144

QC Batch: 132144
Prep Batch: 111988

Date Analyzed: 2016-08-15
QC Preparation: 2016-08-15

Analyzed By: KB
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
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

continued ...

method blank continued ...

Parameter	Flag	Cert	MDL Result	Units	RL
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
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

continued ...

method blank continued ...

Parameter	Flag	Cert	MDL Result	Units	RL
Hexachlorobutadiene		1,2,3,4	<0.760	µg/L	5

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane			53.6	µg/L	1	50.0	107	70 - 130
Toluene-d8			48.4	µg/L	1	50.0	97	70 - 130
4-Bromofluorobenzene (4-BFB)			50.5	µg/L	1	50.0	101	70 - 130

Report Date: August 17, 2016
AFE 403828

Work Order: 16081207
EPNG Line 3031 Spike Test

Page Number: 15 of 34
Lea County, NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 132100
Prep Batch: 111947

Date Analyzed: 2016-08-12
QC Preparation: 2016-08-12

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3	0.998	mg/L	1	1.00	<0.0369	100	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3	1.03	mg/L	1	1.00	<0.0369	103	74.6 - 123	3	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)	0.112	0.114	mg/L	1	0.100	112	114	72.8 - 136
4-Bromofluorobenzene (4-BFB)	0.111	0.110	mg/L	1	0.100	111	110	73.3 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 132122
Prep Batch: 111971

Date Analyzed: 2016-08-15
QC Preparation: 2016-08-15

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	24.7	mg/L	1	25.0	<0.297	99	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	24.2	mg/L	1	25.0	<0.297	97	90 - 110	2	20

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

Report Date: August 17, 2016
AFE 403828

Work Order: 16081207
EPNG Line 3031 Spike Test

Page Number: 16 of 34
Lea County, NM

Laboratory Control Spike (LCS-1)

QC Batch: 132123
Prep Batch: 111972

Date Analyzed: 2016-08-15
QC Preparation: 2016-08-15

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	25.5	mg/L	1	25.0	<0.297	102	90 - 110	4	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: 132127
Prep Batch: 111970

Date Analyzed: 2016-08-16
QC Preparation: 2016-08-15

Analyzed By: HJ
Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3	56.9	mg/L	1	50.0	<0.890	114	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	50.6	mg/L	1	50.0	<0.890	101	70 - 130	12	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	3.10	3.00	mg/L	1	2.50	124	120	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 132144
Prep Batch: 111988

Date Analyzed: 2016-08-15
QC Preparation: 2016-08-15

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	56.8	µg/L	1	50.0	<0.330	114	74.4 - 128
Dichlorodifluoromethane		1,2,3,4	46.4	µg/L	1	50.0	<0.350	93	46.8 - 148
Chloromethane (methyl chloride)		1,2,3,4	53.3	µg/L	1	50.0	<0.330	107	63.8 - 125
Vinyl Chloride		1,2,3,4	56.8	µg/L	1	50.0	<0.410	114	60.3 - 129
Bromomethane (methyl bromide)		1,2,3,4	54.2	µg/L	1	50.0	<1.69	108	49.7 - 141
Chloroethane		1,2,3,4	55.4	µg/L	1	50.0	<0.420	111	62.4 - 131
Trichlorofluoromethane		1,2,3,4	62.1	µg/L	1	50.0	<0.410	124	53.5 - 152
Acetone		1,2,3,4	36.3	µg/L	1	50.0	<1.09	73	20 - 190
Iodomethane (methyl iodide)		1,2,3,4	55.9	µg/L	1	50.0	<2.47	112	67.8 - 135
Carbon Disulfide		1,2,3,4	55.8	µg/L	1	50.0	<0.400	112	68.9 - 136
Acrylonitrile		1,2,3,4	48.7	µg/L	1	50.0	<0.360	97	67.6 - 131
2-Butanone (MEK)		1,2,3,4	42.4	µg/L	1	50.0	<1.67	85	45 - 137
4-Methyl-2-pentanone (MIBK)		1,2,3,4	48.3	µg/L	1	50.0	<2.14	97	61.4 - 142
2-Hexanone		1,2,3,4	43.0	µg/L	1	50.0	<1.49	86	51.7 - 145
trans 1,4-Dichloro-2-butene	Qs	Qs	72.8	µg/L	1	50.0	<1.75	146	44.3 - 137
1,1-Dichloroethene		1,2,3,4	57.0	µg/L	1	50.0	<0.330	114	70.6 - 132
Methylene chloride		1,2,3,4	53.9	µg/L	1	50.0	<2.04	108	66.5 - 135
MTBE		1,2,3,4	56.0	µg/L	1	50.0	<0.320	112	72.1 - 130
trans-1,2-Dichloroethene		1,2,3,4	57.1	µg/L	1	50.0	<0.360	114	75.5 - 127
1,1-Dichloroethane		1,2,3,4	57.1	µg/L	1	50.0	<0.330	114	73.7 - 129
cis-1,2-Dichloroethene		1,2,3,4	56.7	µg/L	1	50.0	<0.330	113	75.5 - 127
2,2-Dichloropropane		1,2,3,4	65.6	µg/L	1	50.0	<0.380	131	24.3 - 158
1,2-Dichloroethane (EDC)		1,2,3,4	56.8	µg/L	1	50.0	<0.280	114	71 - 134
Chloroform		1,2,3,4	60.4	µg/L	1	50.0	<0.390	121	74 - 131
1,1,1-Trichloroethane		1,2,3,4	61.6	µg/L	1	50.0	<0.370	123	59.2 - 150
1,1-Dichloropropene		1,2,3,4	57.9	µg/L	1	50.0	<0.320	116	77.7 - 128
Benzene		1,2,3,4	55.6	µg/L	1	50.0	<0.340	111	73 - 124
Carbon Tetrachloride		1,2,3,4	61.8	µg/L	1	50.0	<0.350	124	61.2 - 146
1,2-Dichloropropane		1,2,3,4	58.7	µg/L	1	50.0	<0.270	117	78 - 125
Trichloroethene (TCE)		1,2,3,4	56.3	µg/L	1	50.0	<0.310	113	70.9 - 137
Dibromomethane (methylene bromide)		1,2,3,4	55.8	µg/L	1	50.0	<0.230	112	76.2 - 127
Bromodichloromethane		1,2,3,4	60.1	µg/L	1	50.0	<0.320	120	73.6 - 130
2-Chloroethyl vinyl ether		1,2,3,4	53.5	µg/L	1	50.0	<0.480	107	61.1 - 136
cis-1,3-Dichloropropene		1,2,3,4	55.4	µg/L	1	50.0	<0.210	111	79 - 125
trans-1,3-Dichloropropene		1,2,3,4	55.3	µg/L	1	50.0	<0.310	111	77.1 - 128
Toluene		1,2,3,4	58.1	µg/L	1	50.0	<0.350	116	75.4 - 126
1,1,2-Trichloroethane		1,2,3,4	49.2	µg/L	1	50.0	<0.390	98	72.9 - 122
1,3-Dichloropropane		1,2,3,4	50.8	µg/L	1	50.0	<0.310	102	75 - 120
Dibromochloromethane		1,3,4	54.1	µg/L	1	50.0	<0.370	108	64.8 - 128
1,2-Dibromoethane (EDB)		1,2,3,4	49.6	µg/L	1	50.0	<0.310	99	74.6 - 121
Tetrachloroethene (PCE)		1,2,3,4	49.8	µg/L	1	50.0	<0.190	100	28.6 - 177
Chlorobenzene		1,2,3,4	54.4	µg/L	1	50.0	<0.290	109	73.5 - 120
1,1,1,2-Tetrachloroethane		1,2,3,4	56.5	µg/L	1	50.0	<0.300	113	67 - 128
Ethylbenzene		1,2,3,4	54.2	µg/L	1	50.0	<0.260	108	73 - 123
m,p-Xylene		1,2,3,4	112	µg/L	1	100	<0.480	112	71 - 126

continued ...

control spikes continued ...

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromoform		1,2,3,4	58.0	µg/L	1	50.0	<0.480	116	55.5 - 131
Styrene		1,2,3,4	53.2	µg/L	1	50.0	<0.250	106	75.7 - 122
o-Xylene		1,2,3,4	56.6	µg/L	1	50.0	<0.260	113	70.2 - 125
1,1,2,2-Tetrachloroethane		1,2,3,4	49.0	µg/L	1	50.0	<0.560	98	61.1 - 133
2-Chlorotoluene		1,2,3,4	51.7	µg/L	1	50.0	<0.250	103	71.8 - 120
1,2,3-Trichloropropane		1,2,3,4	45.7	µg/L	1	50.0	<0.450	91	67.2 - 132
Isopropylbenzene		1,2,3,4	50.1	µg/L	1	50.0	<0.260	100	72.2 - 123
Bromobenzene		1,2,3,4	49.5	µg/L	1	50.0	<0.280	99	66.7 - 121
n-Propylbenzene		1,2,3,4	51.0	µg/L	1	50.0	<0.240	102	72.9 - 121
1,3,5-Trimethylbenzene		1,2,3,4	52.4	µg/L	1	50.0	<0.260	105	68.4 - 126
tert-Butylbenzene		1,2,3,4	52.2	µg/L	1	50.0	<0.270	104	68.7 - 128
1,2,4-Trimethylbenzene		1,2,3,4	52.8	µg/L	1	50.0	<0.270	106	70.4 - 124
1,4-Dichlorobenzene (para)		1,2,3,4	54.1	µg/L	1	50.0	<0.310	108	73.5 - 120
sec-Butylbenzene		1,2,3,4	52.2	µg/L	1	50.0	<0.200	104	69.6 - 128
1,3-Dichlorobenzene (meta)		1,2,3,4	53.3	µg/L	1	50.0	<0.280	107	74.2 - 120
p-Isopropyltoluene		1,2,3	53.0	µg/L	1	50.0	<0.200	106	73.1 - 124
4-Chlorotoluene		1,2,3,4	50.5	µg/L	1	50.0	<0.290	101	72.8 - 120
1,2-Dichlorobenzene (ortho)		1,2,3,4	53.7	µg/L	1	50.0	<0.250	107	65.2 - 126
n-Butylbenzene		1,2,3,4	54.3	µg/L	1	50.0	<0.170	109	70.1 - 127
1,2-Dibromo-3-chloropropane		1,3	49.9	µg/L	1	50.0	<1.70	100	50.5 - 136
1,2,3-Trichlorobenzene		1,2,3,4	63.2	µg/L	1	50.0	<0.400	126	43.3 - 153
1,2,4-Trichlorobenzene		1,2,3,4	61.6	µg/L	1	50.0	<2.12	123	59.6 - 134
Naphthalene		1,2,3,4	60.0	µg/L	1	50.0	<2.23	120	38.5 - 159
Hexachlorobutadiene		1,2,3,4	56.9	µg/L	1	50.0	<0.760	114	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	52.5	µg/L	1	50.0	<0.330	105	74.4 - 128	8	20
Dichlorodifluoromethane	Qr	1,2,3,4	36.6	µg/L	1	50.0	<0.350	73	46.8 - 148	24	20
Chloromethane (methyl chloride)		1,2,3,4	46.6	µg/L	1	50.0	<0.330	93	63.8 - 125	13	20
Vinyl Chloride		1,2,3,4	51.6	µg/L	1	50.0	<0.410	103	60.3 - 129	10	20
Bromomethane (methyl bromide)		1,2,3,4	49.5	µg/L	1	50.0	<1.69	99	49.7 - 141	9	20
Chloroethane		1,2,3,4	50.0	µg/L	1	50.0	<0.420	100	62.4 - 131	10	20
Trichlorofluoromethane		1,2,3,4	53.8	µg/L	1	50.0	<0.410	108	53.5 - 152	14	20
Acetone		1,2,3,4	38.0	µg/L	1	50.0	<1.09	76	20 - 190	5	20
Iodomethane (methyl iodide)		1,2,3,4	51.5	µg/L	1	50.0	<2.47	103	67.8 - 135	8	20
Carbon Disulfide		1,2,3,4	50.7	µg/L	1	50.0	<0.400	101	68.9 - 136	10	20
Acrylonitrile		1,2,3,4	45.2	µg/L	1	50.0	<0.360	90	67.6 - 131	7	20
2-Butanone (MEK)		1,2,3,4	35.5	µg/L	1	50.0	<1.67	71	45 - 137	18	20
4-Methyl-2-pentanone (MIBK)		1,2,3,4	44.0	µg/L	1	50.0	<2.14	88	61.4 - 142	9	20
2-Hexanone		1,2,3,4	39.5	µg/L	1	50.0	<1.49	79	51.7 - 145	8	20
trans 1,4-Dichloro-2-butene		1,2,3,4	67.7	µg/L	1	50.0	<1.75	135	44.3 - 137	7	20
1,1-Dichloroethene		1,2,3,4	51.8	µg/L	1	50.0	<0.330	104	70.6 - 132	10	20

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD	RPD Limit
Methylene chloride		1,2,3,4	49.1	µg/L	1	50.0	<2.04	98	66.5 - 135	9	20
MTBE		1,2,3,4	50.1	µg/L	1	50.0	<0.320	100	72.1 - 130	11	20
trans-1,2-Dichloroethene		1,2,3,4	53.1	µg/L	1	50.0	<0.360	106	75.5 - 127	7	20
1,1-Dichloroethane		1,2,3,4	52.4	µg/L	1	50.0	<0.330	105	73.7 - 129	9	20
cis-1,2-Dichloroethene		1,2,3,4	53.2	µg/L	1	50.0	<0.330	106	75.5 - 127	6	20
2,2-Dichloropropane		1,2,3,4	60.4	µg/L	1	50.0	<0.380	121	24.3 - 158	8	20
1,2-Dichloroethane (EDC)		1,2,3,4	49.8	µg/L	1	50.0	<0.280	100	71 - 134	13	20
Chloroform		1,2,3,4	54.3	µg/L	1	50.0	<0.390	109	74 - 131	11	20
1,1,1-Trichloroethane		1,2,3,4	55.8	µg/L	1	50.0	<0.370	112	59.2 - 150	10	20
1,1-Dichloropropene		1,2,3,4	53.4	µg/L	1	50.0	<0.320	107	77.7 - 128	8	20
Benzene		1,2,3,4	51.4	µg/L	1	50.0	<0.340	103	73 - 124	8	20
Carbon Tetrachloride		1,2,3,4	54.9	µg/L	1	50.0	<0.350	110	61.2 - 146	12	20
1,2-Dichloropropane		1,2,3,4	53.2	µg/L	1	50.0	<0.270	106	78 - 125	10	20
Trichloroethene (TCE)		1,2,3,4	50.9	µg/L	1	50.0	<0.310	102	70.9 - 137	10	20
Dibromomethane (methylene bromide)		1,2,3,4	49.7	µg/L	1	50.0	<0.230	99	76.2 - 127	12	20
Bromodichloromethane		1,2,3,4	54.0	µg/L	1	50.0	<0.320	108	73.6 - 130	11	20
2-Chloroethyl vinyl ether		1,2,3,4	47.7	µg/L	1	50.0	<0.480	95	61.1 - 136	12	20
cis-1,3-Dichloropropene		1,2,3,4	50.5	µg/L	1	50.0	<0.210	101	79 - 125	9	20
trans-1,3-Dichloropropene		1,2,3,4	49.4	µg/L	1	50.0	<0.310	99	77.1 - 128	11	20
Toluene		1,2,3,4	52.7	µg/L	1	50.0	<0.350	105	75.4 - 126	10	20
1,1,2-Trichloroethane		1,2,3,4	45.1	µg/L	1	50.0	<0.390	90	72.9 - 122	9	20
1,3-Dichloropropane		1,2,3,4	46.4	µg/L	1	50.0	<0.310	93	75 - 120	9	20
Dibromochloromethane		1,3,4	49.5	µg/L	1	50.0	<0.370	99	64.8 - 128	9	20
1,2-Dibromoethane (EDB)		1,2,3,4	46.0	µg/L	1	50.0	<0.310	92	74.6 - 121	8	20
Tetrachloroethene (PCE)		1,2,3,4	46.0	µg/L	1	50.0	<0.190	92	28.6 - 177	8	20
Chlorobenzene		1,2,3,4	51.4	µg/L	1	50.0	<0.290	103	73.5 - 120	6	20
1,1,1,2-Tetrachloroethane		1,2,3,4	51.9	µg/L	1	50.0	<0.300	104	67 - 128	8	20
Ethylbenzene		1,2,3,4	50.2	µg/L	1	50.0	<0.260	100	73 - 123	8	20
m,p-Xylene		1,2,3,4	102	µg/L	1	100	<0.480	102	71 - 126	9	20
Bromoform		1,2,3,4	52.9	µg/L	1	50.0	<0.480	106	55.5 - 131	9	20
Styrene		1,2,3,4	49.0	µg/L	1	50.0	<0.250	98	75.7 - 122	8	20
o-Xylene		1,2,3,4	51.2	µg/L	1	50.0	<0.260	102	70.2 - 125	10	20
1,1,2,2-Tetrachloroethane		1,2,3,4	43.5	µg/L	1	50.0	<0.560	87	61.1 - 133	12	20
2-Chlorotoluene		1,2,3,4	47.6	µg/L	1	50.0	<0.250	95	71.8 - 120	8	20
1,2,3-Trichloropropane		1,2,3,4	42.5	µg/L	1	50.0	<0.450	85	67.2 - 132	7	20
Isopropylbenzene		1,2,3,4	46.0	µg/L	1	50.0	<0.260	92	72.2 - 123	8	20
Bromobenzene		1,2,3,4	46.5	µg/L	1	50.0	<0.280	93	66.7 - 121	6	20
n-Propylbenzene		1,2,3,4	47.0	µg/L	1	50.0	<0.240	94	72.9 - 121	8	20
1,3,5-Trimethylbenzene		1,2,3,4	48.2	µg/L	1	50.0	<0.260	96	68.4 - 126	8	20
tert-Butylbenzene		1,2,3,4	47.9	µg/L	1	50.0	<0.270	96	68.7 - 128	9	20
1,2,4-Trimethylbenzene		1,2,3,4	48.6	µg/L	1	50.0	<0.270	97	70.4 - 124	8	20
1,4-Dichlorobenzene (para)		1,2,3,4	49.4	µg/L	1	50.0	<0.310	99	73.5 - 120	9	20
sec-Butylbenzene		1,2,3,4	48.1	µg/L	1	50.0	<0.200	96	69.6 - 128	8	20
1,3-Dichlorobenzene (meta)		1,2,3,4	50.2	µg/L	1	50.0	<0.280	100	74.2 - 120	6	20

continued ...

control spikes continued ...

Param	F	C	LCSD		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
p-Isopropyltoluene		1,2,3	49.1	µg/L	1	50.0	<0.200	98	73.1 - 124	8	20
4-Chlorotoluene		1,2,3,4	46.6	µg/L	1	50.0	<0.290	93	72.8 - 120	8	20
1,2-Dichlorobenzene (ortho)		1,2,3,4	49.3	µg/L	1	50.0	<0.250	99	65.2 - 126	8	20
n-Butylbenzene		1,2,3,4	48.7	µg/L	1	50.0	<0.170	97	70.1 - 127	11	20
1,2-Dibromo-3-chloropropane		1,3	45.1	µg/L	1	50.0	<1.70	90	50.5 - 136	10	20
1,2,3-Trichlorobenzene		1,2,3,4	58.2	µg/L	1	50.0	<0.400	116	43.3 - 153	8	20
1,2,4-Trichlorobenzene		1,2,3,4	55.2	µg/L	1	50.0	<2.12	110	59.6 - 134	11	20
Naphthalene		1,2,3,4	55.1	µg/L	1	50.0	<2.23	110	38.5 - 159	8	20
Hexachlorobutadiene		1,2,3,4	52.8	µg/L	1	50.0	<0.760	106	35.8 - 175	8	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	52.2	50.7	µg/L	1	50.0	104	101	70 - 130
Toluene-d8	48.1	47.8	µg/L	1	50.0	96	96	70 - 130
4-Bromofluorobenzene (4-BFB)	52.5	51.3	µg/L	1	50.0	105	103	70 - 130

Report Date: August 17, 2016
AFE 403828

Work Order: 16081207
EPNG Line 3031 Spike Test

Page Number: 21 of 34
Lea County, NM

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 426316

QC Batch: 132100
Prep Batch: 111947

Date Analyzed: 2016-08-12
QC Preparation: 2016-08-12

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3	14.4	mg/L	10	10.0	6.13	83	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	15.1	mg/L	10	10.0	6.13	90	57 - 134	5	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)			1.08	1.09	mg/L	10	1	108	109	72.8 - 136
4-Bromofluorobenzene (4-BFB)	Q _{sr}	Q _{sr}	1.47	1.45	mg/L	10	1	147	145	73.3 - 120

Matrix Spike (MS-1) Spiked Sample: 426201

QC Batch: 132122
Prep Batch: 111971

Date Analyzed: 2016-08-15
QC Preparation: 2016-08-15

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	3000	mg/L	100	2500	513	99	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	2970	mg/L	100	2500	513	98	80 - 120	1	20

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

Report Date: August 17, 2016
AFE 403828

Work Order: 16081207
EPNG Line 3031 Spike Test

Page Number: 22 of 34
Lea County, NM

Matrix Spike (MS-1) Spiked Sample: 426316

QC Batch: 132123
Prep Batch: 111972

Date Analyzed: 2016-08-15
QC Preparation: 2016-08-15

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	215	mg/L	5	125	94.1	97	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	216	mg/L	5	125	94.1	98	80 - 120	0	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: 426116

QC Batch: 132127
Prep Batch: 111970

Date Analyzed: 2016-08-16
QC Preparation: 2016-08-15

Analyzed By: HJ
Prepared By: HJ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3	46.7	mg/L	1	50.0	<0.890	93	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	48.1	mg/L	1	50.0	<0.890	96	70 - 130	3	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	3.04	3.13	mg/L	1	2.5	122	125	70 - 130

Matrix Spike (MS-1) Spiked Sample: 426376

QC Batch: 132144
Prep Batch: 111988

Date Analyzed: 2016-08-15
QC Preparation: 2016-08-15

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	48.6	µg/L	1	50.0	<0.330	97	64.4 - 146
Dichlorodifluoromethane		1,2,3,4	31.2	µg/L	1	50.0	<0.350	62	36.2 - 162
Chloromethane (methyl chloride)		1,2,3,4	42.7	µg/L	1	50.0	<0.330	85	56.1 - 142
Vinyl Chloride		1,2,3,4	41.2	µg/L	1	50.0	<0.410	82	12 - 172
Bromomethane (methyl bromide)		1,2,3,4	47.0	µg/L	1	50.0	<1.69	94	43.6 - 159
Chloroethane		1,2,3,4	48.5	µg/L	1	50.0	<0.420	97	58 - 148
Trichlorofluoromethane		1,2,3,4	46.8	µg/L	1	50.0	<0.410	94	52.2 - 163
Acetone		1,2,3,4	29.3	µg/L	1	50.0	<1.09	59	12.8 - 120
Iodomethane (methyl iodide)		1,2,3,4	49.1	µg/L	1	50.0	<2.47	98	10 - 200
Carbon Disulfide		1,2,3,4	47.6	µg/L	1	50.0	<0.400	95	57.6 - 149
Acrylonitrile		1,2,3,4	42.5	µg/L	1	50.0	<0.360	85	67.2 - 134
2-Butanone (MEK)		1,2,3,4	28.4	µg/L	1	50.0	<1.67	57	31.3 - 124
4-Methyl-2-pentanone (MIBK)		1,2,3,4	44.8	µg/L	1	50.0	<2.14	90	56.5 - 143
2-Hexanone		1,2,3,4	34.4	µg/L	1	50.0	<1.49	69	29 - 144
trans 1,4-Dichloro-2-butene		1,2,3,4	35.3	µg/L	1	50.0	<1.75	71	10 - 143
1,1-Dichloroethene		1,2,3,4	48.4	µg/L	1	50.0	<0.330	97	34.6 - 166
Methylene chloride		1,2,3,4	44.9	µg/L	1	50.0	<2.04	90	64.3 - 140
MTBE		1,2,3,4	45.8	µg/L	1	50.0	<0.320	92	41.6 - 161
trans-1,2-Dichloroethene		1,2,3,4	49.9	µg/L	1	50.0	<0.360	100	63.2 - 146
1,1-Dichloroethane		1,2,3,4	46.5	µg/L	1	50.0	<0.330	93	69.2 - 143
cis-1,2-Dichloroethene		1,2,3,4	49.6	µg/L	1	50.0	<0.330	99	64.8 - 144
2,2-Dichloropropane		1,2,3,4	45.7	µg/L	1	50.0	<0.380	91	21.7 - 152
1,2-Dichloroethane (EDC)		1,2,3,4	44.0	µg/L	1	50.0	1.09	86	62 - 157
Chloroform		1,2,3,4	49.0	µg/L	1	50.0	<0.390	98	64.9 - 150
1,1,1-Trichloroethane		1,2,3,4	48.0	µg/L	1	50.0	<0.370	96	62.3 - 163
1,1-Dichloropropene		1,2,3,4	49.0	µg/L	1	50.0	<0.320	98	31 - 174
Benzene		1,2,3,4	49.8	µg/L	1	50.0	0.49	99	62 - 139
Carbon Tetrachloride		1,2,3,4	45.7	µg/L	1	50.0	<0.350	91	58 - 164
1,2-Dichloropropane		1,2,3,4	49.3	µg/L	1	50.0	<0.270	99	68.1 - 140
Trichloroethene (TCE)		1,2,3,4	48.6	µg/L	1	50.0	<0.310	97	49.9 - 163
Dibromomethane (methylene bromide)		1,2,3,4	45.3	µg/L	1	50.0	<0.230	91	66.8 - 142
Bromodichloromethane		1,2,3,4	47.2	µg/L	1	50.0	<0.320	94	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	44.1	µg/L	1	50.0	<0.210	88	32.6 - 160
trans-1,3-Dichloropropene		1,2,3,4	41.5	µg/L	1	50.0	<0.310	83	31.4 - 163
Toluene		1,2,3,4	50.1	µg/L	1	50.0	1.26	98	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	42.4	µg/L	1	50.0	<0.310	85	66.2 - 131
Dibromochloromethane		1,3,4	43.2	µg/L	1	50.0	<0.370	86	58.8 - 143
1,2-Dibromoethane (EDB)		1,2,3,4	43.2	µg/L	1	50.0	<0.310	86	66.8 - 132
Tetrachloroethene (PCE)		1,2,3,4	42.2	µg/L	1	50.0	<0.190	84	28.8 - 126
Chlorobenzene		1,2,3,4	48.6	µg/L	1	50.0	<0.290	97	61.6 - 134
1,1,1,2-Tetrachloroethane		1,2,3,4	46.3	µg/L	1	50.0	<0.300	93	63.1 - 139
Ethylbenzene		1,2,3,4	46.3	µg/L	1	50.0	0.38	92	43 - 148
m,p-Xylene		1,2,3,4	93.1	µg/L	1	100	0.82	92	21.5 - 165

continued ...

matrix spikes continued ...

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromoform		1,2,3,4	43.9	µg/L	1	50.0	<0.480	88	49 - 144
Styrene	Qs	Qs	1.27	µg/L	1	50.0	<0.250	2	10 - 192
o-Xylene		1,2,3,4	47.4	µg/L	1	50.0	0.43	94	28.4 - 160
1,1,2,2-Tetrachloroethane		1,2,3,4	40.4	µg/L	1	50.0	<0.560	81	65.3 - 133
2-Chlorotoluene		1,2,3,4	44.0	µg/L	1	50.0	<0.250	88	56 - 134
1,2,3-Trichloropropane		1,2,3,4	39.5	µg/L	1	50.0	<0.450	79	62.8 - 126
Isopropylbenzene		1,2,3,4	44.0	µg/L	1	50.0	<0.260	88	31.4 - 156
Bromobenzene		1,2,3,4	43.3	µg/L	1	50.0	<0.280	87	57.8 - 128
n-Propylbenzene		1,2,3,4	44.0	µg/L	1	50.0	0.29	87	30.5 - 154
1,3,5-Trimethylbenzene		1,2,3,4	44.6	µg/L	1	50.0	<0.260	89	10 - 183
tert-Butylbenzene		1,2,3,4	44.3	µg/L	1	50.0	<0.270	89	42.8 - 148
1,2,4-Trimethylbenzene		1,2,3,4	45.7	µg/L	1	50.0	0.35	91	10 - 179
1,4-Dichlorobenzene (para)		1,2,3,4	47.7	µg/L	1	50.0	<0.310	95	66 - 123
sec-Butylbenzene		1,2,3,4	45.3	µg/L	1	50.0	<0.200	91	30.8 - 155
1,3-Dichlorobenzene (meta)		1,2,3,4	46.5	µg/L	1	50.0	<0.280	93	66 - 124
p-Isopropyltoluene		1,2,3	45.0	µg/L	1	50.0	<0.200	90	20.9 - 164
4-Chlorotoluene		1,2,3,4	43.6	µg/L	1	50.0	<0.290	87	54.8 - 136
1,2-Dichlorobenzene (ortho)		1,2,3,4	46.2	µg/L	1	50.0	<0.250	92	65.9 - 124
n-Butylbenzene		1,2,3,4	45.2	µg/L	1	50.0	<0.170	90	31.3 - 153
1,2-Dibromo-3-chloropropane		1,3	37.6	µg/L	1	50.0	<1.70	75	49.3 - 138
1,2,3-Trichlorobenzene		1,2,3,4	50.5	µg/L	1	50.0	<0.400	101	37.5 - 146
1,2,4-Trichlorobenzene		1,2,3,4	50.1	µg/L	1	50.0	<2.12	100	55.3 - 132
Naphthalene		1,2,3,4	49.7	µg/L	1	50.0	<2.23	99	10 - 169
Hexachlorobutadiene		1,2,3,4	45.6	µg/L	1	50.0	<0.760	91	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	51.5	µg/L	1	50.0	<0.330	103	64.4 - 146	6	20
Dichlorodifluoromethane		1,2,3,4	30.2	µg/L	1	50.0	<0.350	60	36.2 - 162	3	20
Chloromethane (methyl chloride)		1,2,3,4	42.1	µg/L	1	50.0	<0.330	84	56.1 - 142	1	20
Vinyl Chloride		1,2,3,4	41.9	µg/L	1	50.0	<0.410	84	12 - 172	2	20
Bromomethane (methyl bromide)		1,2,3,4	46.2	µg/L	1	50.0	<1.69	92	43.6 - 159	2	20
Chloroethane		1,2,3,4	45.5	µg/L	1	50.0	<0.420	91	58 - 148	6	20
Trichlorofluoromethane		1,2,3,4	43.2	µg/L	1	50.0	<0.410	86	52.2 - 163	8	20
Acetone		1,2,3,4	29.5	µg/L	1	50.0	<1.09	59	12.8 - 120	1	20
Iodomethane (methyl iodide)		1,2,3,4	50.3	µg/L	1	50.0	<2.47	101	10 - 200	2	20
Carbon Disulfide		1,2,3,4	49.3	µg/L	1	50.0	<0.400	99	57.6 - 149	4	20
Acrylonitrile		1,2,3,4	43.1	µg/L	1	50.0	<0.360	86	67.2 - 134	1	20
2-Butanone (MEK)	Qr	Qr	35.6	µg/L	1	50.0	<1.67	71	31.3 - 124	22	20
4-Methyl-2-pentanone (MIBK)		1,2,3,4	42.6	µg/L	1	50.0	<2.14	85	56.5 - 143	5	20
2-Hexanone		1,2,3,4	33.4	µg/L	1	50.0	<1.49	67	29 - 144	3	20
trans 1,4-Dichloro-2-butene		1,2,3,4	38.4	µg/L	1	50.0	<1.75	77	10 - 143	8	20
1,1-Dichloroethene		1,2,3,4	49.8	µg/L	1	50.0	<0.330	100	34.6 - 166	3	20

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD	RPD Limit
Methylene chloride		1,2,3,4	46.3	µg/L	1	50.0	<2.04	93	64.3 - 140	3	20
MTBE		1,2,3,4	45.3	µg/L	1	50.0	<0.320	91	41.6 - 161	1	20
trans-1,2-Dichloroethene		1,2,3,4	51.1	µg/L	1	50.0	<0.360	102	63.2 - 146	2	20
1,1-Dichloroethane		1,2,3,4	46.5	µg/L	1	50.0	<0.330	93	69.2 - 143	0	20
cis-1,2-Dichloroethene		1,2,3,4	51.3	µg/L	1	50.0	<0.330	103	64.8 - 144	3	20
2,2-Dichloropropane		1,2,3,4	44.8	µg/L	1	50.0	<0.380	90	21.7 - 152	2	20
1,2-Dichloroethane (EDC)		1,2,3,4	41.6	µg/L	1	50.0	1.09	81	62 - 157	6	20
Chloroform		1,2,3,4	47.7	µg/L	1	50.0	<0.390	95	64.9 - 150	3	20
1,1,1-Trichloroethane		1,2,3,4	47.0	µg/L	1	50.0	<0.370	94	62.3 - 163	2	20
1,1-Dichloropropene		1,2,3,4	48.3	µg/L	1	50.0	<0.320	97	31 - 174	1	20
Benzene		1,2,3,4	49.2	µg/L	1	50.0	0.49	97	62 - 139	1	20
Carbon Tetrachloride		1,2,3,4	45.5	µg/L	1	50.0	<0.350	91	58 - 164	0	20
1,2-Dichloropropane		1,2,3,4	50.2	µg/L	1	50.0	<0.270	100	68.1 - 140	2	20
Trichloroethene (TCE)		1,2,3,4	50.2	µg/L	1	50.0	<0.310	100	49.9 - 163	3	20
Dibromomethane (methylene bromide)		1,2,3,4	45.1	µg/L	1	50.0	<0.230	90	66.8 - 142	0	20
Bromodichloromethane		1,2,3,4	46.2	µg/L	1	50.0	<0.320	92	63.9 - 152	2	20
2-Chloroethyl vinyl ether		1,2,3,4	<0.480	µg/L	1	50.0	<0.480	0	0 - 120	0	20
cis-1,3-Dichloropropene		1,2,3,4	44.1	µg/L	1	50.0	<0.210	88	32.6 - 160	0	20
trans-1,3-Dichloropropene		1,2,3,4	40.9	µg/L	1	50.0	<0.310	82	31.4 - 163	1	20
Toluene		1,2,3,4	50.2	µg/L	1	50.0	1.26	98	40.7 - 160	0	20
1,1,2-Trichloroethane		1,2,3,4	42.3	µg/L	1	50.0	<0.390	85	66 - 130	2	20
1,3-Dichloropropane		1,2,3,4	42.1	µg/L	1	50.0	<0.310	84	66.2 - 131	1	20
Dibromochloromethane		1,3,4	42.8	µg/L	1	50.0	<0.370	86	58.8 - 143	1	20
1,2-Dibromoethane (EDB)		1,2,3,4	43.5	µg/L	1	50.0	<0.310	87	66.8 - 132	1	20
Tetrachloroethene (PCE)		1,2,3,4	43.9	µg/L	1	50.0	<0.190	88	28.8 - 126	4	20
Chlorobenzene		1,2,3,4	48.0	µg/L	1	50.0	<0.290	96	61.6 - 134	1	20
1,1,1,2-Tetrachloroethane		1,2,3,4	46.4	µg/L	1	50.0	<0.300	93	63.1 - 139	0	20
Ethylbenzene		1,2,3,4	46.4	µg/L	1	50.0	0.38	92	43 - 148	0	20
m,p-Xylene		1,2,3,4	91.9	µg/L	1	100	0.82	91	21.5 - 165	1	20
Bromoform		1,2,3,4	42.6	µg/L	1	50.0	<0.480	85	49 - 144	3	20
Styrene	Qs	Qs 1,2,3,4	1.37	µg/L	1	50.0	<0.250	3	10 - 192	8	20
o-Xylene		1,2,3,4	47.0	µg/L	1	50.0	0.43	93	28.4 - 160	1	20
1,1,2,2-Tetrachloroethane		1,2,3,4	40.7	µg/L	1	50.0	<0.560	81	65.3 - 133	1	20
2-Chlorotoluene		1,2,3,4	43.9	µg/L	1	50.0	<0.250	88	56 - 134	0	20
1,2,3-Trichloropropane		1,2,3,4	39.7	µg/L	1	50.0	<0.450	79	62.8 - 126	0	20
Isopropylbenzene		1,2,3,4	44.6	µg/L	1	50.0	<0.260	89	31.4 - 156	1	20
Bromobenzene		1,2,3,4	42.2	µg/L	1	50.0	<0.280	84	57.8 - 128	3	20
n-Propylbenzene		1,2,3,4	44.7	µg/L	1	50.0	0.29	89	30.5 - 154	2	20
1,3,5-Trimethylbenzene		1,2,3,4	45.7	µg/L	1	50.0	<0.260	91	10 - 183	2	20
tert-Butylbenzene		1,2,3,4	46.4	µg/L	1	50.0	<0.270	93	42.8 - 148	5	20
1,2,4-Trimethylbenzene		1,2,3,4	45.8	µg/L	1	50.0	0.35	91	10 - 179	0	20
1,4-Dichlorobenzene (para)		1,2,3,4	48.6	µg/L	1	50.0	<0.310	97	66 - 123	2	20
sec-Butylbenzene		1,2,3,4	46.3	µg/L	1	50.0	<0.200	93	30.8 - 155	2	20
1,3-Dichlorobenzene (meta)		1,2,3,4	48.4	µg/L	1	50.0	<0.280	97	66 - 124	4	20

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
p-Isopropyltoluene		1,2,3	46.8	µg/L	1	50.0	<0.200	94	20.9 - 164	4	20
4-Chlorotoluene		1,2,3,4	43.2	µg/L	1	50.0	<0.290	86	54.8 - 136	1	20
1,2-Dichlorobenzene (ortho)		1,2,3,4	47.3	µg/L	1	50.0	<0.250	95	65.9 - 124	2	20
n-Butylbenzene		1,2,3,4	46.1	µg/L	1	50.0	<0.170	92	31.3 - 153	2	20
1,2-Dibromo-3-chloropropane		1,3	40.4	µg/L	1	50.0	<1.70	81	49.3 - 138	7	20
1,2,3-Trichlorobenzene		1,2,3,4	57.2	µg/L	1	50.0	<0.400	114	37.5 - 146	12	20
1,2,4-Trichlorobenzene		1,2,3,4	55.5	µg/L	1	50.0	<2.12	111	55.3 - 132	10	20
Naphthalene		1,2,3,4	56.8	µg/L	1	50.0	<2.23	114	10 - 169	13	20
Hexachlorobutadiene		1,2,3,4	49.1	µg/L	1	50.0	<0.760	98	47.4 - 146	7	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	49.1	48.7	µg/L	1	50	98	97	70 - 130
Toluene-d8	47.3	46.4	µg/L	1	50	95	93	70 - 130
4-Bromofluorobenzene (4-BFB)	48.3	47.0	µg/L	1	50	97	94	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 132100

Date Analyzed: 2016-08-12

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	1.17	117	80 - 120	2016-08-12

Standard (CCV-2)

QC Batch: 132100

Date Analyzed: 2016-08-12

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	1.05	105	80 - 120	2016-08-12

Standard (CCV-1)

QC Batch: 132122

Date Analyzed: 2016-08-15

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	25.1	100	90 - 110	2016-08-15

Standard (CCV-2)

QC Batch: 132122

Date Analyzed: 2016-08-15

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	27.2	109	90 - 110	2016-08-15

Report Date: August 17, 2016
AFE 403828

Work Order: 16081207
EPNG Line 3031 Spike Test

Page Number: 28 of 34
Lea County, NM

Standard (CCV-1)

QC Batch: 132123

Date Analyzed: 2016-08-15

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	27.2	109	90 - 110	2016-08-15

Standard (CCV-2)

QC Batch: 132123

Date Analyzed: 2016-08-15

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	25.5	102	90 - 110	2016-08-15

Standard (CCV-1)

QC Batch: 132127

Date Analyzed: 2016-08-16

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	561	112	80 - 120	2016-08-16

Standard (CCV-2)

QC Batch: 132127

Date Analyzed: 2016-08-16

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	570	114	80 - 120	2016-08-16

Standard (CCV-1)

QC Batch: 132144

Date Analyzed: 2016-08-15

Analyzed By: KB

Param	Flag	Cert	Units	CCVs	CCVs	CCVs	Percent	Date
				True	Found	Percent	Recovery	
				Conc.	Conc.	Recovery	Limits	Analyzed
Bromochloromethane		1,2,3,4	µg/L	50.0	50.4	101	80 - 120	2016-08-15
Dichlorodifluoromethane	Qc	Qc	1,2,3,4	µg/L	50.0	39.9	80	2016-08-15
Chloromethane (methyl chloride)		1,2,3,4	µg/L	50.0	46.2	92	80 - 120	2016-08-15
Vinyl Chloride		1,2,3,4	µg/L	50.0	51.2	102	80 - 120	2016-08-15
Bromomethane (methyl bromide)		1,2,3,4	µg/L	50.0	49.8	100	80 - 120	2016-08-15
Chloroethane		1,2,3,4	µg/L	50.0	51.1	102	80 - 120	2016-08-15
Trichlorofluoromethane		1,2,3,4	µg/L	50.0	60.0	120	80 - 120	2016-08-15
Acetone	Qc	Qc	1,2,3,4	µg/L	50.0	31.3	63	2016-08-15
Iodomethane (methyl iodide)		1,2,3,4	µg/L	50.0	49.5	99	80 - 120	2016-08-15
Carbon Disulfide		1,2,3,4	µg/L	50.0	49.6	99	80 - 120	2016-08-15
Acrylonitrile		1,2,3,4	µg/L	50.0	44.6	89	80 - 120	2016-08-15
2-Butanone (MEK)	Qc	Qc	1,2,3,4	µg/L	50.0	35.7	71	2016-08-15
4-Methyl-2-pentanone (MIBK)		1,2,3,4	µg/L	50.0	40.5	81	80 - 120	2016-08-15
2-Hexanone	Qc	Qc	1,2,3,4	µg/L	50.0	38.7	77	2016-08-15
trans 1,4-Dichloro-2-butene	Qc	Qc	1,2,3,4	µg/L	50.0	66.1	132	2016-08-15
1,1-Dichloroethene		1,2,3,4	µg/L	50.0	50.4	101	80 - 120	2016-08-15
Methylene chloride		1,2,3,4	µg/L	50.0	48.4	97	80 - 120	2016-08-15
MTBE		1,2,3,4	µg/L	50.0	51.0	102	80 - 120	2016-08-15
trans-1,2-Dichloroethene		1,2,3,4	µg/L	50.0	51.8	104	80 - 120	2016-08-15
1,1-Dichloroethane		1,2,3,4	µg/L	50.0	52.2	104	80 - 120	2016-08-15
cis-1,2-Dichloroethene		1,2,3,4	µg/L	50.0	51.0	102	80 - 120	2016-08-15
2,2-Dichloropropane	Qc	Qc	1,2,3,4	µg/L	50.0	63.2	126	2016-08-15
1,2-Dichloroethane (EDC)		1,2,3,4	µg/L	50.0	52.5	105	80 - 120	2016-08-15
Chloroform		1,2,3,4	µg/L	50.0	55.8	112	80 - 120	2016-08-15
1,1,1-Trichloroethane		1,2,3,4	µg/L	50.0	57.0	114	80 - 120	2016-08-15
1,1-Dichloropropene		1,2,3,4	µg/L	50.0	53.0	106	80 - 120	2016-08-15
Benzene		1,2,3,4	µg/L	50.0	50.2	100	80 - 120	2016-08-15
Carbon Tetrachloride		1,2,3,4	µg/L	50.0	56.3	113	80 - 120	2016-08-15
1,2-Dichloropropane		1,2,3,4	µg/L	50.0	52.2	104	80 - 120	2016-08-15
Trichloroethene (TCE)		1,2,3,4	µg/L	50.0	50.0	100	80 - 120	2016-08-15
Dibromomethane (methylene bromide)		1,2,3,4	µg/L	50.0	50.5	101	80 - 120	2016-08-15
Bromodichloromethane		1,2,3,4	µg/L	50.0	55.4	111	80 - 120	2016-08-15
2-Chloroethyl vinyl ether		1,2,3,4	µg/L	50.0	49.7	99	80 - 120	2016-08-15
cis-1,3-Dichloropropene		1,2,3,4	µg/L	50.0	50.1	100	80 - 120	2016-08-15
trans-1,3-Dichloropropene		1,2,3,4	µg/L	50.0	50.5	101	80 - 120	2016-08-15
Toluene		1,2,3,4	µg/L	50.0	52.4	105	80 - 120	2016-08-15
1,1,2-Trichloroethane		1,2,3,4	µg/L	50.0	43.4	87	80 - 120	2016-08-15
1,3-Dichloropropane		1,2,3,4	µg/L	50.0	46.6	93	80 - 120	2016-08-15
Dibromochloromethane		1,3,4	µg/L	50.0	48.7	97	80 - 120	2016-08-15
1,2-Dibromoethane (EDB)		1,2,3,4	µg/L	50.0	44.6	89	80 - 120	2016-08-15
Tetrachloroethene (PCE)		1,2,3,4	µg/L	50.0	44.8	90	80 - 120	2016-08-15
Chlorobenzene		1,2,3,4	µg/L	50.0	49.9	100	80 - 120	2016-08-15
1,1,1,2-Tetrachloroethane		1,2,3,4	µg/L	50.0	51.7	103	80 - 120	2016-08-15
Ethylbenzene		1,2,3,4	µg/L	50.0	49.6	99	80 - 120	2016-08-15

continued . . .

standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
m,p-Xylene		1,2,3,4	µg/L	100	103	103	80 - 120	2016-08-15
Bromoform		1,2,3,4	µg/L	50.0	51.8	104	80 - 120	2016-08-15
Styrene		1,2,3,4	µg/L	50.0	49.4	99	80 - 120	2016-08-15
o-Xylene		1,2,3,4	µg/L	50.0	52.3	105	80 - 120	2016-08-15
1,1,2,2-Tetrachloroethane		1,2,3,4	µg/L	50.0	44.1	88	80 - 120	2016-08-15
2-Chlorotoluene		1,2,3,4	µg/L	50.0	46.5	93	80 - 120	2016-08-15
1,2,3-Trichloropropane		1,2,3,4	µg/L	50.0	41.2	82	80 - 120	2016-08-15
Isopropylbenzene		1,2,3,4	µg/L	50.0	44.5	89	80 - 120	2016-08-15
Bromobenzene		1,2,3,4	µg/L	50.0	44.7	89	80 - 120	2016-08-15
n-Propylbenzene		1,2,3,4	µg/L	50.0	45.6	91	80 - 120	2016-08-15
1,3,5-Trimethylbenzene		1,2,3,4	µg/L	50.0	46.9	94	80 - 120	2016-08-15
tert-Butylbenzene		1,2,3,4	µg/L	50.0	45.6	91	80 - 120	2016-08-15
1,2,4-Trimethylbenzene		1,2,3,4	µg/L	50.0	48.1	96	80 - 120	2016-08-15
1,4-Dichlorobenzene (para)		1,2,3,4	µg/L	50.0	49.2	98	80 - 120	2016-08-15
sec-Butylbenzene		1,2,3,4	µg/L	50.0	46.7	93	80 - 120	2016-08-15
1,3-Dichlorobenzene (meta)		1,2,3,4	µg/L	50.0	48.7	97	80 - 120	2016-08-15
p-Isopropyltoluene		1,2,3	µg/L	50.0	47.5	95	80 - 120	2016-08-15
4-Chlorotoluene		1,2,3,4	µg/L	50.0	46.0	92	80 - 120	2016-08-15
1,2-Dichlorobenzene (ortho)		1,2,3,4	µg/L	50.0	48.0	96	80 - 120	2016-08-15
n-Butylbenzene		1,2,3,4	µg/L	50.0	48.0	96	80 - 120	2016-08-15
1,2-Dibromo-3-chloropropane		1,3	µg/L	50.0	41.7	83	80 - 120	2016-08-15
1,2,3-Trichlorobenzene		1,2,3,4	µg/L	50.0	48.5	97	80 - 120	2016-08-15
1,2,4-Trichlorobenzene		1,2,3,4	µg/L	50.0	50.6	101	80 - 120	2016-08-15
Naphthalene		1,2,3,4	µg/L	50.0	45.2	90	80 - 120	2016-08-15
Hexachlorobutadiene		1,2,3,4	µg/L	50.0	50.1	100	80 - 120	2016-08-15

Standard (CCV-2)

QC Batch: 132144

Date Analyzed: 2016-08-15

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	52.6	105	80 - 120	2016-08-15
Dichlorodifluoromethane	Qc	Qc	µg/L	50.0	31.5	63	80 - 120	2016-08-15
Chloromethane (methyl chloride)		1,2,3,4	µg/L	50.0	41.9	84	80 - 120	2016-08-15
Vinyl Chloride		1,2,3,4	µg/L	50.0	42.8	86	80 - 120	2016-08-15
Bromomethane (methyl bromide)		1,2,3,4	µg/L	50.0	46.4	93	80 - 120	2016-08-15
Chloroethane		1,2,3,4	µg/L	50.0	46.2	92	80 - 120	2016-08-15
Trichlorofluoromethane		1,2,3,4	µg/L	50.0	45.3	91	80 - 120	2016-08-15
Acetone	Qc	Qc	µg/L	50.0	29.6	59	80 - 120	2016-08-15

continued ...

standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Iodomethane (methyl iodide)		1,2,3,4	µg/L	50.0	49.7	99	80 - 120	2016-08-15
Carbon Disulfide		1,2,3,4	µg/L	50.0	48.6	97	80 - 120	2016-08-15
Acrylonitrile		1,2,3,4	µg/L	50.0	43.3	87	80 - 120	2016-08-15
2-Butanone (MEK)	Qc	Qc	µg/L	50.0	38.5	77	80 - 120	2016-08-15
4-Methyl-2-pentanone (MIBK)		1,2,3,4	µg/L	50.0	45.6	91	80 - 120	2016-08-15
2-Hexanone	Qc	Qc	µg/L	50.0	35.9	72	80 - 120	2016-08-15
trans 1,4-Dichloro-2-butene		1,2,3,4	µg/L	50.0	42.8	86	80 - 120	2016-08-15
1,1-Dichloroethene		1,2,3,4	µg/L	50.0	50.5	101	80 - 120	2016-08-15
Methylene chloride		1,2,3,4	µg/L	50.0	47.8	96	80 - 120	2016-08-15
MTBE		1,2,3,4	µg/L	50.0	47.8	96	80 - 120	2016-08-15
trans-1,2-Dichloroethene		1,2,3,4	µg/L	50.0	51.7	103	80 - 120	2016-08-15
1,1-Dichloroethane		1,2,3,4	µg/L	50.0	48.2	96	80 - 120	2016-08-15
cis-1,2-Dichloroethene		1,2,3,4	µg/L	50.0	50.6	101	80 - 120	2016-08-15
2,2-Dichloropropane		1,2,3,4	µg/L	50.0	46.9	94	80 - 120	2016-08-15
1,2-Dichloroethane (EDC)		1,2,3,4	µg/L	50.0	45.5	91	80 - 120	2016-08-15
Chloroform		1,2,3,4	µg/L	50.0	50.2	100	80 - 120	2016-08-15
1,1,1-Trichloroethane		1,2,3,4	µg/L	50.0	50.5	101	80 - 120	2016-08-15
1,1-Dichloropropene		1,2,3,4	µg/L	50.0	49.7	99	80 - 120	2016-08-15
Benzene		1,2,3,4	µg/L	50.0	49.9	100	80 - 120	2016-08-15
Carbon Tetrachloride		1,2,3,4	µg/L	50.0	48.3	97	80 - 120	2016-08-15
1,2-Dichloropropane		1,2,3,4	µg/L	50.0	50.4	101	80 - 120	2016-08-15
Trichloroethene (TCE)		1,2,3,4	µg/L	50.0	51.2	102	80 - 120	2016-08-15
Dibromomethane (methylene bromide)		1,2,3,4	µg/L	50.0	47.3	95	80 - 120	2016-08-15
Bromodichloromethane		1,2,3,4	µg/L	50.0	49.6	99	80 - 120	2016-08-15
2-Chloroethyl vinyl ether		1,2,3,4	µg/L	50.0	45.6	91	80 - 120	2016-08-15
cis-1,3-Dichloropropene		1,2,3,4	µg/L	50.0	45.1	90	80 - 120	2016-08-15
trans-1,3-Dichloropropene		1,2,3,4	µg/L	50.0	43.9	88	80 - 120	2016-08-15
Toluene		1,2,3,4	µg/L	50.0	51.4	103	80 - 120	2016-08-15
1,1,2-Trichloroethane		1,2,3,4	µg/L	50.0	44.3	89	80 - 120	2016-08-15
1,3-Dichloropropane		1,2,3,4	µg/L	50.0	44.4	89	80 - 120	2016-08-15
Dibromochloromethane		1,3,4	µg/L	50.0	45.4	91	80 - 120	2016-08-15
1,2-Dibromoethane (EDB)		1,2,3,4	µg/L	50.0	44.9	90	80 - 120	2016-08-15
Tetrachloroethene (PCE)		1,2,3,4	µg/L	50.0	44.4	89	80 - 120	2016-08-15
Chlorobenzene		1,2,3,4	µg/L	50.0	49.3	99	80 - 120	2016-08-15
1,1,1,2-Tetrachloroethane		1,2,3,4	µg/L	50.0	47.3	95	80 - 120	2016-08-15
Ethylbenzene		1,2,3,4	µg/L	50.0	47.6	95	80 - 120	2016-08-15
m,p-Xylene		1,2,3,4	µg/L	100	96.5	96	80 - 120	2016-08-15
Bromoform		1,2,3,4	µg/L	50.0	45.8	92	80 - 120	2016-08-15
Styrene		1,2,3,4	µg/L	50.0	46.8	94	80 - 120	2016-08-15
o-Xylene		1,2,3,4	µg/L	50.0	48.8	98	80 - 120	2016-08-15
1,1,2,2-Tetrachloroethane		1,2,3,4	µg/L	50.0	42.4	85	80 - 120	2016-08-15
2-Chlorotoluene		1,2,3,4	µg/L	50.0	47.1	94	80 - 120	2016-08-15
1,2,3-Trichloropropane		1,2,3,4	µg/L	50.0	41.4	83	80 - 120	2016-08-15

continued ...

standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Isopropylbenzene		1,2,3,4	µg/L	50.0	46.8	94	80 - 120	2016-08-15
Bromobenzene		1,2,3,4	µg/L	50.0	44.6	89	80 - 120	2016-08-15
n-Propylbenzene		1,2,3,4	µg/L	50.0	46.7	93	80 - 120	2016-08-15
1,3,5-Trimethylbenzene		1,2,3,4	µg/L	50.0	48.1	96	80 - 120	2016-08-15
tert-Butylbenzene		1,2,3,4	µg/L	50.0	48.0	96	80 - 120	2016-08-15
1,2,4-Trimethylbenzene		1,2,3,4	µg/L	50.0	47.8	96	80 - 120	2016-08-15
1,4-Dichlorobenzene (para)		1,2,3,4	µg/L	50.0	49.9	100	80 - 120	2016-08-15
sec-Butylbenzene		1,2,3,4	µg/L	50.0	48.1	96	80 - 120	2016-08-15
1,3-Dichlorobenzene (meta)		1,2,3,4	µg/L	50.0	49.1	98	80 - 120	2016-08-15
p-Isopropyltoluene		1,2,3	µg/L	50.0	48.1	96	80 - 120	2016-08-15
4-Chlorotoluene		1,2,3,4	µg/L	50.0	45.5	91	80 - 120	2016-08-15
1,2-Dichlorobenzene (ortho)		1,2,3,4	µg/L	50.0	49.1	98	80 - 120	2016-08-15
n-Butylbenzene		1,2,3,4	µg/L	50.0	47.4	95	80 - 120	2016-08-15
1,2-Dibromo-3-chloropropane		1,3	µg/L	50.0	41.1	82	80 - 120	2016-08-15
1,2,3-Trichlorobenzene		1,2,3,4	µg/L	50.0	53.2	106	80 - 120	2016-08-15
1,2,4-Trichlorobenzene		1,2,3,4	µg/L	50.0	53.8	108	80 - 120	2016-08-15
Naphthalene		1,2,3,4	µg/L	50.0	51.2	102	80 - 120	2016-08-15
Hexachlorobutadiene		1,2,3,4	µg/L	50.0	50.5	101	80 - 120	2016-08-15

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.

TraceAnalysis, Inc.6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750
Fax (972) 242-7750Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

email: lab@traceanalysis.com

Company Name:	<u>Kindex Morgan</u>	Phone #:	<u>(719) 505-5255</u>
Address:	<u>(Street, City, Zip)</u>	Fax #:	
	<u>2 North Nevada Ave., Colorado Springs, CO 80903</u>		
Contact Person:	<u>Mary Martino</u>	E-mail:	<u>mary_martino@kindexmorgan.com</u>
Invoice to:			
(If different from above)			
Project #:	<u>AFE 403828</u>	Project Name:	<u>EPN & Line 3031 Spike Test</u>
Project Location (including state):	<u>Lea County, NM</u>	Sampler Signature:	<u>Elisabeth Westcott</u>

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX			PRESERVATIVE METHOD				SAMPLING	
				WATER	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE
311	rupture #7 background	1		X							X	
312	rupture #7 contaminated	1		X							X	
313	rupture #7 release	1	250mL	X							X	
314	rupture #7 release	9	40mL	X							X	
315	rupture #8 background	1		X							X	
316	rupture #8 contaminated	1		X							X	
317	rupture #8 release	1	250mL	X							X	
318	rupture #8 release	9	40mL	X							X	
319	3 rd party damage ground	1		X							X	
320	3 rd party damage trench	1		X							X	

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR
Elisabeth Westcott	KMI	8/11/16	10:50am	Jesse Valenzuela	Brandon Clark	8/11/16	10:50		29	
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR
				Shirley	Wendy	8/13/16	8:55		22	

LAB USE ONLY	Initial Y N	Headspace Y N	Log-In-Review

REMARKS:	email results to: mary_martino@kindexmorgan.com mary_martino@kindexmorgan.com glen_thompson@kindexmorgan.com elisabeth_westcott@kindexmorgan.com
Dry Weight Basis Required	☒
TRRP Report Required	☒
Check If Special Reporting Limits Are Needed	☒

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Revision 1, 09/15/15

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