

Parameter	Flag	Cert	MDL		Units	RL
			Result			
Benzene		s	<0.000299		mg/L	0.001
Toluene		s	<0.000247		mg/L	0.001
Ethylbenzene		s	<0.000423		mg/L	0.001
Xylene		s	<0.000552		mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0875	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0850	mg/L	1	0.100	85	70 - 130

Method Blank (1) QC Batch: 126886

QC Batch: 126886 Date Analyzed: 2015-12-10
Prep Batch: 107383 QC Preparation: 2015-11-27Analyzed By: MN
Prepared By: MN

Parameter	Flag	Cert	MDL		Units	RL
			Result			
Naphthalene		1,2,3,4,6	<0.0000656		mg/L	0.0002
2-Methylnaphthalene		1,2,3,4,6	<0.0000516		mg/L	0.0002
1-Methylnaphthalene		1	<0.0000663		mg/L	0.0002
Acenaphthylene		1,2,3,4,6	<0.0000581		mg/L	0.0002
Acenaphthene		1,2,3,4,6	<0.0000332		mg/L	0.0002
Dibenzofuran		1,2,3,4,6	<0.0000607		mg/L	0.0002
Fluorene		1,2,3,4,6	<0.0000788		mg/L	0.0002
Anthracene		1,2,3,4,6	<0.0000321		mg/L	0.0002
Phenanthrene		1,2,3,4,6	<0.0000516		mg/L	0.0002
Fluoranthene		1,2,3,4,6	<0.0000638		mg/L	0.0002
Pyrene		1,2,3,4,6	<0.0000415		mg/L	0.0002
Benzo(a)anthracene		1,2,3,4,6	<0.0000721		mg/L	0.0002
Chrysene		1,2,3,4,6	<0.0000811		mg/L	0.0002
Benzo(b)fluoranthene		1,2,3,4,6	<0.0000710		mg/L	0.0002
Benzo(k)fluoranthene		1,2,3,4,6	<0.0000561		mg/L	0.0002
Benzo(a)pyrene		1,2,3,4,6	<0.0000418		mg/L	0.0002
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	<0.0000537		mg/L	0.0002
Dibenzo(a,h)anthracene		1,2,3,4,6	<0.0000562		mg/L	0.0002
Benzo(g,h,i)perylene		1,2,3,4,6	<0.0000519		mg/L	0.0002

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			3.10	mg/L	1	8.00	39	10 - 120
2-Fluorobiphenyl			3.34	mg/L	1	8.00	42	35.9 - 120

continued ...

Report Date: December 11, 2015
TNM-LF-2000-7

Work Order: 15112501
Bob Durham

Page Number: 24 of 38

method blank continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Terphenyl-d14			3.59	mg/L	1	8.00	45	23.2 - 120

Method Blank (1) QC Batch: 126924

QC Batch: 126924
Prep Batch: 107415

Date Analyzed: 2015-12-11
QC Preparation: 2015-12-02

Analyzed By: MN
Prepared By: MN

Parameter	Flag	Cert	MDL Result	Units	RL
Naphthalene		1,2,3,4,6	<0.0000656	mg/L	0.0002
2-Methylnaphthalene		1,2,3,4,6	<0.0000516	mg/L	0.0002
1-Methylnaphthalene		1	<0.0000663	mg/L	0.0002
Acenaphthylene		1,2,3,4,6	<0.0000581	mg/L	0.0002
Acenaphthene		1,2,3,4,6	<0.0000332	mg/L	0.0002
Dibenzofuran		1,2,3,4,6	<0.0000607	mg/L	0.0002
Fluorene		1,2,3,4,6	<0.0000788	mg/L	0.0002
Anthracene		1,2,3,4,6	<0.0000321	mg/L	0.0002
Phenanthrene		1,2,3,4,6	<0.0000516	mg/L	0.0002
Fluoranthene		1,2,3,4,6	<0.0000638	mg/L	0.0002
Pyrene		1,2,3,4,6	<0.0000415	mg/L	0.0002
Benzo(a)anthracene		1,2,3,4,6	<0.0000721	mg/L	0.0002
Chrysene		1,2,3,4,6	<0.0000811	mg/L	0.0002
Benzo(b)fluoranthene		1,2,3,4,6	<0.0000710	mg/L	0.0002
Benzo(k)fluoranthene		1,2,3,4,6	<0.0000561	mg/L	0.0002
Benzo(a)pyrene		1,2,3,4,6	<0.0000418	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	<0.0000537	mg/L	0.0002
Dibenzo(a,h)anthracene		1,2,3,4,6	<0.0000562	mg/L	0.0002
Benzo(g,h,i)perylene		1,2,3,4,6	<0.0000519	mg/L	0.0002

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			3.04	mg/L	1	8.00	38	10 - 120
2-Fluorobiphenyl			3.59	mg/L	1	8.00	45	35.9 - 120
Terphenyl-d14			3.70	mg/L	1	8.00	46	23.2 - 120

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 126744
Prep Batch: 107234

Date Analyzed: 2015-12-03
QC Preparation: 2015-12-01

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0947	mg/L	1	0.100	<0.000299	95	70 - 130
Toluene		5	0.0949	mg/L	1	0.100	<0.000247	95	70 - 130
Ethylbenzene		5	0.0912	mg/L	1	0.100	<0.000423	91	70 - 130
Xylene		5	0.267	mg/L	1	0.300	<0.000552	89	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
Benzene		5	0.100	mg/L	1	0.100	<0.000299	100	70 - 130	5	20
Toluene		5	0.0991	mg/L	1	0.100	<0.000247	99	70 - 130	4	20
Ethylbenzene		5	0.0985	mg/L	1	0.100	<0.000423	98	70 - 130	8	20
Xylene		5	0.285	mg/L	1	0.300	<0.000552	95	70 - 130	6	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)	0.0863	0.0882	mg/L	1	0.100	86	88	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0893	0.0917	mg/L	1	0.100	89	92	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 126746
Prep Batch: 107250

Date Analyzed: 2015-12-03
QC Preparation: 2015-12-02

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.103	mg/L	1	0.100	<0.000299	103	70 - 130
Toluene		5	0.101	mg/L	1	0.100	<0.000247	101	70 - 130
Ethylbenzene		5	0.0983	mg/L	1	0.100	<0.000423	98	70 - 130
Xylene		5	0.292	mg/L	1	0.300	<0.000552	97	70 - 130

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

Param	F	C	LCSD		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.0871	mg/L	1	0.100	<0.000299	87	70 - 130	17	20
Toluene		5	0.0830	mg/L	1	0.100	<0.000247	83	70 - 130	20	20
Ethylbenzene		5	0.0811	mg/L	1	0.100	<0.000423	81	70 - 130	19	20
Xylene	¹ Qr	Qr 5	0.231	mg/L	1	0.300	<0.000552	77	70 - 130	23	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)	0.0736	0.0893	mg/L	1	0.100	74	89	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0769	0.0904	mg/L	1	0.100	77	90	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 126795
Prep Batch: 107304

Date Analyzed: 2015-12-04
QC Preparation: 2015-12-03

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.104	mg/L	1	0.100	<0.000299	104	70 - 130
Toluene		5	0.101	mg/L	1	0.100	<0.000247	101	70 - 130
Ethylbenzene		5	0.102	mg/L	1	0.100	<0.000423	102	70 - 130
Xylene		5	0.288	mg/L	1	0.300	<0.000552	96	70 - 130

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

Param	F	C	LCSD		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.0996	mg/L	1	0.100	<0.000299	100	70 - 130	4	20
Toluene		5	0.0972	mg/L	1	0.100	<0.000247	97	70 - 130	4	20
Ethylbenzene		5	0.0974	mg/L	1	0.100	<0.000423	97	70 - 130	5	20
Xylene		5	0.281	mg/L	1	0.300	<0.000552	94	70 - 130	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
Trifluorotoluene (TFT)	0.0848	0.0841	mg/L	1	0.100	85	84	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0895	0.0949	mg/L	1	0.100	90	95	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 126886
Prep Batch: 107383

Date Analyzed: 2015-12-10
QC Preparation: 2015-11-27

Analyzed By: MN
Prepared By: MN

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene		1,2,3,4,6	6.65	mg/L	1	8.00	<0.0000656	83	49.7 - 120
2-Methylnaphthalene		1,2,3,4,6	6.95	mg/L	1	8.00	<0.0000516	87	44.6 - 120
1-Methylnaphthalene		1	7.15	mg/L	1	8.00	<0.0000663	89	10 - 189
Acenaphthylene		1,2,3,4,6	6.87	mg/L	1	8.00	<0.0000581	86	40.9 - 120
Acenaphthene		1,2,3,4,6	6.76	mg/L	1	8.00	<0.0000332	84	49.9 - 120
Dibenzofuran		1,2,3,4,6	6.66	mg/L	1	8.00	<0.0000607	83	34 - 120
Fluorene		1,2,3,4,6	6.31	mg/L	1	8.00	<0.0000788	79	49.7 - 120
Anthracene		1,2,3,4,6	6.65	mg/L	1	8.00	<0.0000321	83	11.4 - 155
Phenanthrene		1,2,3,4,6	6.45	mg/L	1	8.00	<0.0000516	81	41 - 120
Fluoranthene		1,2,3,4,6	6.48	mg/L	1	8.00	<0.0000638	81	35.7 - 120
Pyrene		1,2,3,4,6	6.69	mg/L	1	8.00	<0.0000415	84	19.5 - 139
Benzo(a)anthracene		1,2,3,4,6	6.26	mg/L	1	8.00	<0.0000721	78	53.4 - 120
Chrysene		1,2,3,4,6	13.3	mg/L	1	8.00	<0.0000811	166	10 - 170
Benzo(b)fluoranthene		1,2,3,4,6	7.37	mg/L	1	8.00	<0.0000710	92	29.2 - 120
Benzo(k)fluoranthene		1,2,3,4,6	9.13	mg/L	1	8.00	<0.0000561	114	23.4 - 120
Benzo(a)pyrene		1,2,3,4,6	8.36	mg/L	1	8.00	<0.0000418	104	23.4 - 120
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	8.44	mg/L	1	8.00	<0.0000537	106	10 - 129
Dibenzo(a,h)anthracene		1,2,3,4,6	12.6	mg/L	1	8.00	<0.0000562	158	10 - 174
Benzo(g,h,i)perylene	Qs	Qs 1,2,3,4,6	9.72	mg/L	1	8.00	<0.0000519	122	30.6 - 120

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

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Naphthalene		1,2,3,4,6	6.74	mg/L	1	8.00	<0.0000656	84	49.7 - 120	1	20
2-Methylnaphthalene		1,2,3,4,6	7.05	mg/L	1	8.00	<0.0000516	88	44.6 - 120	1	20
1-Methylnaphthalene		1	7.16	mg/L	1	8.00	<0.0000663	90	10 - 189	0	20
Acenaphthylene		1,2,3,4,6	6.90	mg/L	1	8.00	<0.0000581	86	40.9 - 120	0	20
Acenaphthene		1,2,3,4,6	6.80	mg/L	1	8.00	<0.0000332	85	49.9 - 120	1	20
Dibenzofuran		1,2,3,4,6	6.61	mg/L	1	8.00	<0.0000607	83	34 - 120	1	20
Fluorene		1,2,3,4,6	6.40	mg/L	1	8.00	<0.0000788	80	49.7 - 120	1	20
Anthracene		1,2,3,4,6	6.67	mg/L	1	8.00	<0.0000321	83	11.4 - 155	0	20
Phenanthrene		1,2,3,4,6	6.60	mg/L	1	8.00	<0.0000516	82	41 - 120	2	20
Fluoranthene		1,2,3,4,6	6.59	mg/L	1	8.00	<0.0000638	82	35.7 - 120	2	20
Pyrene		1,2,3,4,6	6.71	mg/L	1	8.00	<0.0000415	84	19.5 - 139	0	20
Benzo(a)anthracene		1,2,3,4,6	6.28	mg/L	1	8.00	<0.0000721	78	53.4 - 120	0	20
Chrysene		1,2,3,4,6	13.3	mg/L	1	8.00	<0.0000811	166	10 - 170	0	20
Benzo(b)fluoranthene		1,2,3,4,6	7.28	mg/L	1	8.00	<0.0000710	91	29.2 - 120	1	20
Benzo(k)fluoranthene		1,2,3,4,6	9.17	mg/L	1	8.00	<0.0000561	115	23.4 - 120	0	20
Benzo(a)pyrene		1,2,3,4,6	8.32	mg/L	1	8.00	<0.0000418	104	23.4 - 120	0	20

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	8.35	mg/L	1	8.00	<0.0000537	104	10 - 129	1	20
Dibenzo(a,h)anthracene		1,2,3,4,6	12.4	mg/L	1	8.00	<0.0000562	155	10 - 174	2	20
Benzo(g,h,i)perylene	Qs	Qs 1,2,3,4,6	9.77	mg/L	1	8.00	<0.0000519	122	30.6 - 120	0	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
Nitrobenzene-d5	6.65	6.76	mg/L	1	8.00	83	84	10 - 120
2-Fluorobiphenyl	7.19	7.20	mg/L	1	8.00	90	90	35.9 - 120
Terphenyl-d14	7.39	7.42	mg/L	1	8.00	92	93	23.2 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 126924
Prep Batch: 107415

Date Analyzed: 2015-12-11
QC Preparation: 2015-12-02

Analyzed By: MN
Prepared By: MN

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene		1,2,3,4,6	6.47	mg/L	1	8.00	<0.0000656	81	49.7 - 120
2-Methylnaphthalene		1,2,3,4,6	6.58	mg/L	1	8.00	<0.0000516	82	44.6 - 120
1-Methylnaphthalene		1	6.72	mg/L	1	8.00	<0.0000663	84	10 - 189
Acenaphthylene		1,2,3,4,6	6.79	mg/L	1	8.00	<0.0000581	85	40.9 - 120
Acenaphthene		1,2,3,4,6	6.64	mg/L	1	8.00	<0.0000332	83	49.9 - 120
Dibenzofuran		1,2,3,4,6	6.45	mg/L	1	8.00	<0.0000607	81	34 - 120
Fluorene		1,2,3,4,6	6.24	mg/L	1	8.00	<0.0000788	78	49.7 - 120
Anthracene		1,2,3,4,6	6.67	mg/L	1	8.00	<0.0000321	83	11.4 - 155
Phenanthrene		1,2,3,4,6	6.48	mg/L	1	8.00	<0.0000516	81	41 - 120
Fluoranthene		1,2,3,4,6	7.06	mg/L	1	8.00	<0.0000638	88	35.7 - 120
Pyrene		1,2,3,4,6	6.94	mg/L	1	8.00	<0.0000415	87	19.5 - 139
Benzo(a)anthracene		1,2,3,4,6	6.36	mg/L	1	8.00	<0.0000721	80	53.4 - 120
Chrysene		1,2,3,4,6	13.1	mg/L	1	8.00	<0.0000811	164	10 - 170
Benzo(b)fluoranthene		1,2,3,4,6	7.70	mg/L	1	8.00	<0.0000710	96	29.2 - 120
Benzo(k)fluoranthene		1,2,3,4,6	9.08	mg/L	1	8.00	<0.0000561	114	23.4 - 120
Benzo(a)pyrene		1,2,3,4,6	8.48	mg/L	1	8.00	<0.0000418	106	23.4 - 120
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	8.83	mg/L	1	8.00	<0.0000537	110	10 - 129
Dibenzo(a,h)anthracene		1,2,3,4,6	12.8	mg/L	1	8.00	<0.0000562	160	10 - 174
Benzo(g,h,i)perylene	Qs	Qs 1,2,3,4,6	10.0	mg/L	1	8.00	<0.0000519	125	30.6 - 120

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

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Naphthalene		1,2,3,4,6	6.57	mg/L	1	8.00	<0.0000656	82	49.7 - 120	2	20
2-Methylnaphthalene		1,2,3,4,6	6.48	mg/L	1	8.00	<0.0000516	81	44.6 - 120	2	20
1-Methylnaphthalene		1	6.69	mg/L	1	8.00	<0.0000663	84	10 - 189	0	20
Acenaphthylene		1,2,3,4,6	6.89	mg/L	1	8.00	<0.0000581	86	40.9 - 120	2	20
Acenaphthene		1,2,3,4,6	6.78	mg/L	1	8.00	<0.0000332	85	49.9 - 120	2	20
Dibenzofuran		1,2,3,4,6	6.56	mg/L	1	8.00	<0.0000607	82	34 - 120	2	20
Fluorene		1,2,3,4,6	6.22	mg/L	1	8.00	<0.0000788	78	49.7 - 120	0	20
Anthracene		1,2,3,4,6	6.62	mg/L	1	8.00	<0.0000321	83	11.4 - 155	1	20
Phenanthrene		1,2,3,4,6	6.43	mg/L	1	8.00	<0.0000516	80	41 - 120	1	20
Fluoranthene		1,2,3,4,6	7.00	mg/L	1	8.00	<0.0000638	88	35.7 - 120	1	20
Pyrene		1,2,3,4,6	6.80	mg/L	1	8.00	<0.0000415	85	19.5 - 139	2	20
Benzo(a)anthracene		1,2,3,4,6	6.38	mg/L	1	8.00	<0.0000721	80	53.4 - 120	0	20
Chrysene		1,2,3,4,6	13.3	mg/L	1	8.00	<0.0000811	166	10 - 170	2	20
Benzo(b)fluoranthene		1,2,3,4,6	7.51	mg/L	1	8.00	<0.0000710	94	29.2 - 120	2	20
Benzo(k)fluoranthene		1,2,3,4,6	8.93	mg/L	1	8.00	<0.0000561	112	23.4 - 120	2	20
Benzo(a)pyrene		1,2,3,4,6	8.24	mg/L	1	8.00	<0.0000418	103	23.4 - 120	3	20
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	8.49	mg/L	1	8.00	<0.0000537	106	10 - 129	4	20
Dibenzo(a,h)anthracene		1,2,3,4,6	12.3	mg/L	1	8.00	<0.0000562	154	10 - 174	4	20
Benzo(g,h,i)perylene	Qs	Qs 1,2,3,4,6	9.69	mg/L	1	8.00	<0.0000519	121	30.6 - 120	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
Nitrobenzene-d5	6.73	6.67	mg/L	1	8.00	84	83	10 - 120
2-Fluorobiphenyl	7.40	7.45	mg/L	1	8.00	92	93	35.9 - 120
Terphenyl-d14	7.72	7.64	mg/L	1	8.00	96	96	23.2 - 120

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 408881

QC Batch: 126744
Prep Batch: 107234

Date Analyzed: 2015-12-03
QC Preparation: 2015-12-01

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		s	0.108	mg/L	1	0.100	<0.000299	108	70 - 130
Toluene		s	0.106	mg/L	1	0.100	<0.000247	106	70 - 130
Ethylbenzene		s	0.103	mg/L	1	0.100	<0.000423	103	70 - 130
Xylene		s	0.294	mg/L	1	0.300	<0.000552	98	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
Benzene		s	0.103	mg/L	1	0.100	<0.000299	103	70 - 130	5	20
Toluene		s	0.103	mg/L	1	0.100	<0.000247	103	70 - 130	3	20
Ethylbenzene		s	0.103	mg/L	1	0.100	<0.000423	103	70 - 130	0	20
Xylene		s	0.297	mg/L	1	0.300	<0.000552	99	70 - 130	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
Trifluorotoluene (TFT)	0.0852	0.0859	mg/L	1	0.1	85	86	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0858	0.0900	mg/L	1	0.1	86	90	70 - 130

Matrix Spike (MS-1) Spiked Sample: 409027

QC Batch: 126746
Prep Batch: 107250

Date Analyzed: 2015-12-03
QC Preparation: 2015-12-02

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		s	0.0962	mg/L	1	0.100	<0.000299	96	70 - 130
Toluene		s	0.0929	mg/L	1	0.100	<0.000247	93	70 - 130
Ethylbenzene		s	0.0911	mg/L	1	0.100	<0.000423	91	70 - 130
Xylene		s	0.266	mg/L	1	0.300	<0.000552	89	70 - 130

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

Report Date: December 11, 2015
TNM-LF-2000-7

Work Order: 15112501
Bob Durham

Page Number: 31 of 38

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.100	mg/L	1	0.100	<0.000299	100	70 - 130	4	20
Toluene		5	0.0972	mg/L	1	0.100	<0.000247	97	70 - 130	4	20
Ethylbenzene		5	0.0969	mg/L	1	0.100	<0.000423	97	70 - 130	6	20
Xylene		5	0.282	mg/L	1	0.300	<0.000552	94	70 - 130	6	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)	0.0803	0.0831	mg/L	1	0.1	80	83	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0927	0.0900	mg/L	1	0.1	93	90	70 - 130

Matrix Spike (MS-1) Spiked Sample: 409047

QC Batch: 126795
Prep Batch: 107304

Date Analyzed: 2015-12-04
QC Preparation: 2015-12-03

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.107	mg/L	1	0.100	<0.000299	107	70 - 130
Toluene		5	0.103	mg/L	1	0.100	<0.000247	103	70 - 130
Ethylbenzene		5	0.102	mg/L	1	0.100	<0.000423	102	70 - 130
Xylene		5	0.295	mg/L	1	0.300	<0.000552	98	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
Benzene		5	0.108	mg/L	1	0.100	<0.000299	108	70 - 130	1	20
Toluene		5	0.105	mg/L	1	0.100	<0.000247	105	70 - 130	2	20
Ethylbenzene		5	0.106	mg/L	1	0.100	<0.000423	106	70 - 130	4	20
Xylene		5	0.307	mg/L	1	0.300	<0.000552	102	70 - 130	4	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)	0.0807	0.0860	mg/L	1	0.1	81	86	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0854	0.0913	mg/L	1	0.1	85	91	70 - 130

Calibration Standards

Standard (CCV-2)

QC Batch: 126744

Date Analyzed: 2015-12-03

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.102	102	80 - 120	2015-12-03
Toluene		5	mg/L	0.100	0.103	103	80 - 120	2015-12-03
Ethylbenzene		5	mg/L	0.100	0.100	100	80 - 120	2015-12-03
Xylene		5	mg/L	0.300	0.285	95	80 - 120	2015-12-03

Standard (CCV-3)

QC Batch: 126744

Date Analyzed: 2015-12-03

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.104	104	80 - 120	2015-12-03
Toluene		5	mg/L	0.100	0.101	101	80 - 120	2015-12-03
Ethylbenzene		5	mg/L	0.100	0.104	104	80 - 120	2015-12-03
Xylene		5	mg/L	0.300	0.291	97	80 - 120	2015-12-03

Standard (CCV-1)

QC Batch: 126746

Date Analyzed: 2015-12-03

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.104	104	80 - 120	2015-12-03
Toluene		5	mg/L	0.100	0.100	100	80 - 120	2015-12-03
Ethylbenzene		5	mg/L	0.100	0.100	100	80 - 120	2015-12-03
Xylene		5	mg/L	0.300	0.294	98	80 - 120	2015-12-03

Standard (CCV-2)

QC Batch: 126746

Date Analyzed: 2015-12-03

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		s	mg/L	0.100	0.103	103	80 - 120	2015-12-03
Toluene		s	mg/L	0.100	0.0991	99	80 - 120	2015-12-03
Ethylbenzene		s	mg/L	0.100	0.0963	96	80 - 120	2015-12-03
Xylene		s	mg/L	0.300	0.279	93	80 - 120	2015-12-03

Standard (CCV-3)

QC Batch: 126746

Date Analyzed: 2015-12-03

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		s	mg/L	0.100	0.104	104	80 - 120	2015-12-03
Toluene		s	mg/L	0.100	0.102	102	80 - 120	2015-12-03
Ethylbenzene		s	mg/L	0.100	0.0979	98	80 - 120	2015-12-03
Xylene		s	mg/L	0.300	0.287	96	80 - 120	2015-12-03

Standard (CCV-1)

QC Batch: 126795

Date Analyzed: 2015-12-04

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		s	mg/L	0.100	0.104	104	80 - 120	2015-12-04
Toluene		s	mg/L	0.100	0.102	102	80 - 120	2015-12-04
Ethylbenzene		s	mg/L	0.100	0.0979	98	80 - 120	2015-12-04
Xylene		s	mg/L	0.300	0.287	96	80 - 120	2015-12-04

Standard (CCV-2)

QC Batch: 126795

Date Analyzed: 2015-12-04

Analyzed By: AK

Report Date: December 11, 2015
TNM-LF-2000-7

Work Order: 15112501
Bob Durham

Page Number: 34 of 38

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.102	102	80 - 120	2015-12-04
Toluene		5	mg/L	0.100	0.100	100	80 - 120	2015-12-04
Ethylbenzene		5	mg/L	0.100	0.0972	97	80 - 120	2015-12-04
Xylene		5	mg/L	0.300	0.287	96	80 - 120	2015-12-04

Standard (CCV-1)

QC Batch: 126886

Date Analyzed: 2015-12-10

Analyzed By: MN

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		1,2,3,4,6	mg/L	60.0	60.6	101	80 - 120	2015-12-10
2-Methylnaphthalene		1,2,3,4,6	mg/L	60.0	61.0	102	80 - 120	2015-12-10
1-Methylnaphthalene		1	mg/L	60.0	61.2	102	80 - 120	2015-12-10
Acenaphthylene		1,2,3,4,6	mg/L	60.0	63.2	105	80 - 120	2015-12-10
Acenaphthene		1,2,3,4,6	mg/L	60.0	62.5	104	80 - 120	2015-12-10
Dibenzofuran		1,2,3,4,6	mg/L	60.0	63.3	106	80 - 120	2015-12-10
Fluorene		1,2,3,4,6	mg/L	60.0	63.6	106	80 - 120	2015-12-10
Anthracene		1,2,3,4,6	mg/L	60.0	57.9	96	80 - 120	2015-12-10
Phenanthrene		1,2,3,4,6	mg/L	60.0	58.0	97	80 - 120	2015-12-10
Fluoranthene		1,2,3,4,6	mg/L	60.0	59.5	99	80 - 120	2015-12-10
Pyrene		1,2,3,4,6	mg/L	60.0	63.7	106	80 - 120	2015-12-10
Benzo(a)anthracene		1,2,3,4,6	mg/L	60.0	58.6	98	80 - 120	2015-12-10
Chrysene		1,2,3,4,6	mg/L	60.0	59.6	99	80 - 120	2015-12-10
Benzo(b)fluoranthene		1,2,3,4,6	mg/L	60.0	52.6	88	80 - 120	2015-12-10
Benzo(k)fluoranthene		1,2,3,4,6	mg/L	60.0	60.0	100	80 - 120	2015-12-10
Benzo(a)pyrene		1,2,3,4,6	mg/L	60.0	56.0	93	80 - 120	2015-12-10
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	mg/L	60.0	55.2	92	80 - 120	2015-12-10
Dibenzo(a,h)anthracene		1,2,3,4,6	mg/L	60.0	55.2	92	80 - 120	2015-12-10
Benzo(g,h,i)perylene		1,2,3,4,6	mg/L	60.0	55.4	92	80 - 120	2015-12-10

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			56.0	mg/L	1	60.0	93	-
2-Fluorobiphenyl			60.4	mg/L	1	60.0	101	-
Terphenyl-d14			64.2	mg/L	1	60.0	107	-

Standard (CCV-2)

QC Batch: 126886

Date Analyzed: 2015-12-10

Analyzed By: MN

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		1,2,3,4,6	mg/L	60.0	60.3	100	80 - 120	2015-12-10
2-Methylnaphthalene		1,2,3,4,6	mg/L	60.0	60.3	100	80 - 120	2015-12-10
1-Methylnaphthalene		1	mg/L	60.0	59.2	99	80 - 120	2015-12-10
Acenaphthylene		1,2,3,4,6	mg/L	60.0	62.0	103	80 - 120	2015-12-10
Acenaphthene		1,2,3,4,6	mg/L	60.0	61.6	103	80 - 120	2015-12-10
Dibenzofuran		1,2,3,4,6	mg/L	60.0	61.3	102	80 - 120	2015-12-10
Fluorene		1,2,3,4,6	mg/L	60.0	58.8	98	80 - 120	2015-12-10
Anthracene		1,2,3,4,6	mg/L	60.0	58.0	97	80 - 120	2015-12-10
Phenanthrene		1,2,3,4,6	mg/L	60.0	58.6	98	80 - 120	2015-12-10
Fluoranthene		1,2,3,4,6	mg/L	60.0	61.1	102	80 - 120	2015-12-10
Pyrene		1,2,3,4,6	mg/L	60.0	62.3	104	80 - 120	2015-12-10
Benzo(a)anthracene		1,2,3,4,6	mg/L	60.0	58.4	97	80 - 120	2015-12-10
Chrysene		1,2,3,4,6	mg/L	60.0	59.5	99	80 - 120	2015-12-10
Benzo(b)fluoranthene		1,2,3,4,6	mg/L	60.0	53.0	88	80 - 120	2015-12-10
Benzo(k)fluoranthene		1,2,3,4,6	mg/L	60.0	60.8	101	80 - 120	2015-12-10
Benzo(a)pyrene		1,2,3,4,6	mg/L	60.0	55.8	93	80 - 120	2015-12-10
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	mg/L	60.0	54.5	91	80 - 120	2015-12-10
Dibenzo(a,h)anthracene		1,2,3,4,6	mg/L	60.0	54.1	90	80 - 120	2015-12-10
Benzo(g,h,i)perylene		1,2,3,4,6	mg/L	60.0	54.1	90	80 - 120	2015-12-10

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			55.8	mg/L	1	60.0	93	-
2-Fluorobiphenyl			63.4	mg/L	1	60.0	106	-
Terphenyl-d14			61.8	mg/L	1	60.0	103	-

Standard (CCV-1)

QC Batch: 126924

Date Analyzed: 2015-12-11

Analyzed By: MN

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		1,2,3,4,6	mg/L	60.0	60.0	100	80 - 120	2015-12-11
2-Methylnaphthalene		1,2,3,4,6	mg/L	60.0	59.7	100	80 - 120	2015-12-11
1-Methylnaphthalene		1	mg/L	60.0	57.6	96	80 - 120	2015-12-11
Acenaphthylene		1,2,3,4,6	mg/L	60.0	62.2	104	80 - 120	2015-12-11
Acenaphthene		1,2,3,4,6	mg/L	60.0	61.2	102	80 - 120	2015-12-11

continued ...

standard continued . . .

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dibenzofuran		1,2,3,4,6	mg/L	60.0	61.6	103	80 - 120	2015-12-11
Fluorene		1,2,3,4,6	mg/L	60.0	59.2	99	80 - 120	2015-12-11
Anthracene		1,2,3,4,6	mg/L	60.0	57.4	96	80 - 120	2015-12-11
Phenanthrene		1,2,3,4,6	mg/L	60.0	57.3	96	80 - 120	2015-12-11
Fluoranthene		1,2,3,4,6	mg/L	60.0	59.6	99	80 - 120	2015-12-11
Pyrene		1,2,3,4,6	mg/L	60.0	61.8	103	80 - 120	2015-12-11
Benzo(a)anthracene		1,2,3,4,6	mg/L	60.0	58.1	97	80 - 120	2015-12-11
Chrysene		1,2,3,4,6	mg/L	60.0	59.4	99	80 - 120	2015-12-11
Benzo(b)fluoranthene		1,2,3,4,6	mg/L	60.0	53.2	89	80 - 120	2015-12-11
Benzo(k)fluoranthene		1,2,3,4,6	mg/L	60.0	62.0	103	80 - 120	2015-12-11
Benzo(a)pyrene		1,2,3,4,6	mg/L	60.0	56.1	94	80 - 120	2015-12-11
Indeno(1,2,3-cd)pyrene		1,2,3,4,6	mg/L	60.0	54.4	91	80 - 120	2015-12-11
Dibenzo(a,h)anthracene		1,2,3,4,6	mg/L	60.0	54.5	91	80 - 120	2015-12-11
Benzo(g,h,i)perylene		1,2,3,4,6	mg/L	60.0	53.8	90	80 - 120	2015-12-11

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			55.1	mg/L	1	60.0	92	-
2-Fluorobiphenyl			63.0	mg/L	1	60.0	105	-
Terphenyl-d14			61.5	mg/L	1	60.0	102	-

Appendix

Report Definitions

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

Laboratory Certifications

	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	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-15-11	Lubbock
5	NELAP	T104704392-14-8	Midland
6		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.

F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

- 1 Use MS/MSD to show analysis is in control.

Attachments

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

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1 (888) 588-3443

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2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
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Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
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Fax (575) 392-4508

Company Name: TRC Solutions Phone #: 432 520-7720

Address: (Street, City, Zip) 2057 Commerce Dr Midland TX 79703

Contact Person: Curt Stanley

Invoice to: (If different from above) Plains

Project #: TNM-LF-2000-7 Project Name: Bob Duhann

Project Location (including state): Midland Sampler Signature: [Signature]

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB #	FIELD CODE	# CONTAINERS	VOLUME / AMOUNT	MATRIX	PRESERVATIVE METHOD	SAMPLING DATE	TIME	Turn Around Time if different from standard
409023	MW11	3	VOA X	WATER	HCl	11/23/15	1615	
409024	MW 20			WATER	H2SO4	11/23/15	1638	
409025	MW 21			WATER	NaOH	11/23/15	1652	
409026	MW 24			WATER	ICE	11/23/15	1705	
409027	MW 25			WATER	NONE	11/23/15	1720	
409028	MW 27			WATER		11/24/15	1015	
409029	MW 28			WATER		11/24/15	1038	
409030	MW 30			WATER		11/24/15	1051	
409031	MW 33			WATER		11/24/15	1110	
409032	MW 15			WATER		11/24/15	1133	
409033	MW 23			WATER		11/24/15	1207	

LAB USE ONLY

Relinquished by: [Signature] Date: 11/25/15 Time: 08:58 Company: TRC

Relinquished by: [Signature] Date: 11/25/15 Time: 09:58 Company: TA

Relinquished by: [Signature] Date: 11/25/15 Time: 09:58 Company: TA

REMARKS:

TPH 418.1 / TX1005 / TX1005 Ext(C35)

TPH 8015 GRO / DRO / TVHC

PAH 8270 / 625

Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7

TCLP Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Volatiles

TCLP Semi Volatiles

TCLP Pesticides

RCI

GC/MS Vol. 8260 / 624

GC/MS Semi. Vol. 8270 / 625

PCBs 8082 / 608

Pesticides 8081 / 608

BOD, TSS, pH

Moisture Content

Cl, F, SO4, NO3-N, NO2-N, PO4-P, Alkalinity

Na, Ca, Mg, K, TDS, EC

Dry Weight Basis Required ☐

TRRP Report Required ☐

Check if Special Reporting Limits Are Needed ☐

TraceAnalysis, Inc.

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email: lab@traceanalysis.com

Company Name:

Phone #:

432 520 7720

Address:

Fax #:

2057 Commerce Dr Midland Tx 79703

Contact Person:

E-mail:

Curt Stanley

Invoice to:

(If different from above)

Plains

Project #:

Project Name:

TNM- LF- 2000-7 Bob Dyer

Project Location (including state):

Sampler Signature:

Maxwell

ANALYSIS REQUEST

(Circle or Specify Method No.)

2034 Commerce Dr Midway IL 61703														
E-mail: Curt Stanley														
Invoice to: (If different from above) Plains														
Project #: TNM-LF-2000-3														
Project Location (including state):														
Sampler Signature: <u>Manuel</u> Project Name: <u>Bob Darden</u>														
LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING		
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE
409034	MW 3	3	VOA X					3			X		11/24/15	1223
409035	MW 31	1	1	1				1						1256
409036	MW 37	1	1	1				1						1312
409037	MW 6	1	1	1				1						1339
409038	MW 7	1	1	1				1						1401
409039	MW 8	1	1	1				1						1420
409040	MW 10	1	1	1				1						1445
409041	MW 16	1	1	1				1						1525
409042	MW 1	1	1	1				1						1612
409043	MW 13	6	WJ	1				1						1629
409044	MW 2	3	1	1				1						1710
3														
MTBE 8021 / 602 / 8260 / 624														
BTEX 8021 / 602 / 8260 / 624														
TPH 418.1 / TX1005 / TX1005 EX(C35)														
TPH 8015 GRO / DRO / TVHC														
PAH 8270 / 625														
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7														
TCLP Metals Ag As Ba Cd Cr Pb Se Hg														
TCLP Volatiles														
TCLP Semi Volatiles														
TCLP Pesticides														
RCI														
GC/MS Vol. 8260 / 624														
GC/MS Semi. Vol. 8270 / 625														
PCB's 8082 / 608														
Pesticides 8081 / 608														
BOD, TSS, pH														
Moisture Content														
Cl, F, SO ₄ , NO ₃ -N, NO ₂ -N, PO ₄ -P, Alkalinity														
Na, Ca, Mg, K, TDS, EC														
Hold														
Turn Around Time if different from standard														

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E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Curt Stanley
TRC Solutions
2057 Commerce
Midland, Tx, 79703

Report Date: February 26, 2016

Work Order: 16022401



Project Name: Bob Durham
Project Number: TNM-LF-2000-7

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
414886	MW 1	water	2016-02-22	16:18	2016-02-24
414887	MW 13	water	2016-02-22	16:46	2016-02-24
414888	MW 2	water	2016-02-22	17:23	2016-02-24
414889	MW 32	water	2016-02-22	17:44	2016-02-24
414890	MW 38	water	2016-02-23	11:35	2016-02-24
414891	MW 4	water	2016-02-23	12:07	2016-02-24
414892	MW 56	water	2016-02-23	12:25	2016-02-24
414893	MW 5	water	2016-02-23	13:01	2016-02-24
414894	MW 12	water	2016-02-23	13:38	2016-02-24

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 15 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Notes:

For inorganic analyses, the term MQL should actually read PQL.

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style and is positioned above a horizontal line.

Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

Report Contents

Case Narrative	4
Analytical Report	5
Sample 414886 (MW 1)	5
Sample 414887 (MW 13)	5
Sample 414888 (MW 2)	5
Sample 414889 (MW 32)	6
Sample 414890 (MW 38)	6
Sample 414891 (MW 4)	7
Sample 414892 (MW 56)	7
Sample 414893 (MW 5)	8
Sample 414894 (MW 12)	8
Method Blanks	10
QC Batch 128477 - Method Blank (1)	10
Laboratory Control Spikes	11
QC Batch 128477 - LCS (1)	11
Matrix Spikes	12
QC Batch 128477 - MS (1)	12
Calibration Standards	13
QC Batch 128477 - CCV (1)	13
QC Batch 128477 - CCV (2)	13
Limits of Detection (LOD)	14
Appendix	15
Report Definitions	15
Laboratory Certifications	15
Standard Flags	15
Attachments	15

Case Narrative

Samples for project Bob Durham were received by TraceAnalysis, Inc. on 2016-02-24 and assigned to work order 16022401. Samples for work order 16022401 were received intact at a temperature of 3.8 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	108769	2016-02-25 at 09:43	128477	2016-02-26 at 08:14

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 16022401 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: 414886 - MW 1

Laboratory: Midland

Analysis: BTEX

QC Batch: 128477

Prep Batch: 108769

Analytical Method: S 8021B

Date Analyzed: 2016-02-26

Sample Preparation: 2016-02-25

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0869	mg/L	1	0.100	87	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0883	mg/L	1	0.100	88	70 - 130

Sample: 414887 - MW 13

Laboratory: Midland

Analysis: BTEX

QC Batch: 128477

Prep Batch: 108769

Analytical Method: S 8021B

Date Analyzed: 2016-02-26

Sample Preparation: 2016-02-25

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0887	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0902	mg/L	1	0.100	90	70 - 130

Sample: 414888 - MW 2

Laboratory: Midland
Analysis: BTEX
QC Batch: 128477
Prep Batch: 108769

Analytical Method: S 8021B
Date Analyzed: 2016-02-26
Sample Preparation: 2016-02-25

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

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.100	mg/L	1	0.100	100	70 - 130
4-Bromofluorobenzene (4-BFB)			0.105	mg/L	1	0.100	105	70 - 130

Sample: 414889 - MW 32

Laboratory: Midland
Analysis: BTEX
QC Batch: 128477
Prep Batch: 108769

Analytical Method: S 8021B
Date Analyzed: 2016-02-26
Sample Preparation: 2016-02-25

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

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.102	mg/L	1	0.100	102	70 - 130
4-Bromofluorobenzene (4-BFB)			0.105	mg/L	1	0.100	105	70 - 130

Sample: 414890 - MW 38

Laboratory: Midland
Analysis: BTEX
QC Batch: 128477

Analytical Method: S 8021B
Date Analyzed: 2016-02-26

Prep Method: S 5030B
Analyzed By: AK

Prep Batch: 108769

Sample Preparation: 2016-02-25

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0970	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0917	mg/L	1	0.100	92	70 - 130

Sample: 414891 - MW 4

Laboratory: Midland

Analysis: BTEX

QC Batch: 128477

Prep Batch: 108769

Analytical Method: S 8021B

Date Analyzed: 2016-02-26

Sample Preparation: 2016-02-25

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0959	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0993	mg/L	1	0.100	99	70 - 130

Sample: 414892 - MW 56

Laboratory: Midland

Analysis: BTEX

QC Batch: 128477

Prep Batch: 108769

Analytical Method: S 8021B

Date Analyzed: 2016-02-26

Sample Preparation: 2016-02-25

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0923	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0929	mg/L	1	0.100	93	70 - 130

Sample: 414893 - MW 5

Laboratory: Midland

Analysis: BTEX

QC Batch: 128477

Prep Batch: 108769

Analytical Method: S 8021B

Date Analyzed: 2016-02-26

Sample Preparation: 2016-02-25

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	1	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0972	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.102	mg/L	1	0.100	102	70 - 130

Sample: 414894 - MW 12

Laboratory: Midland

Analysis: BTEX

QC Batch: 128477

Prep Batch: 108769

Analytical Method: S 8021B

Date Analyzed: 2016-02-26

Sample Preparation: 2016-02-25

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	1	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504

continued ...

sample 414894 continued ...

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Toluene	u	1	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene		1	0.00360	0.00360	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	1	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0941	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.119	mg/L	1	0.100	119	70 - 130

Method Blanks

Method Blank (1)

QC Batch: 128477
Prep Batch: 108769

Date Analyzed: 2016-02-26
QC Preparation: 2016-02-25

Analyzed By: AK
Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
Benzene		1	<0.000504	mg/L	0.000504
Toluene		1	<0.000621	mg/L	0.000621
Ethylbenzene		1	<0.000763	mg/L	0.000763
Xylene		1	<0.000256	mg/L	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.100	mg/L	1	0.100	100	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0944	mg/L	1	0.100	94	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 128477
Prep Batch: 108769

Date Analyzed: 2016-02-26
QC Preparation: 2016-02-25

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0982	mg/L	1	0.100	<0.000504	98	70 - 130
Toluene		1	0.102	mg/L	1	0.100	<0.000621	102	70 - 130
Ethylbenzene		1	0.102	mg/L	1	0.100	<0.000763	102	70 - 130
Xylene		1	0.296	mg/L	1	0.300	<0.000256	99	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
Benzene		1	0.0963	mg/L	1	0.100	<0.000504	96	70 - 130	2	20
Toluene		1	0.101	mg/L	1	0.100	<0.000621	101	70 - 130	1	20
Ethylbenzene		1	0.103	mg/L	1	0.100	<0.000763	103	70 - 130	1	20
Xylene		1	0.295	mg/L	1	0.300	<0.000256	98	70 - 130	0	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0907	0.0978	mg/L	1	0.100	91	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0976	0.0878	mg/L	1	0.100	98	88	70 - 130

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 414886

QC Batch: 128477
Prep Batch: 108769

Date Analyzed: 2016-02-26
QC Preparation: 2016-02-25

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.108	mg/L	1	0.100	<0.000504	108	70 - 130
Toluene		1	0.116	mg/L	1	0.100	<0.000621	116	70 - 130
Ethylbenzene		1	0.122	mg/L	1	0.100	<0.000763	122	70 - 130
Xylene		1	0.339	mg/L	1	0.300	<0.000256	113	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
Benzene		1	0.103	mg/L	1	0.100	<0.000504	103	70 - 130	5	20
Toluene		1	0.108	mg/L	1	0.100	<0.000621	108	70 - 130	7	20
Ethylbenzene		1	0.110	mg/L	1	0.100	<0.000763	110	70 - 130	10	20
Xylene		1	0.313	mg/L	1	0.300	<0.000256	104	70 - 130	8	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0917	0.0925	mg/L	1	0.1	92	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.102	0.0979	mg/L	1	0.1	102	98	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 128477

Date Analyzed: 2016-02-26

Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0912	91	80 - 120	2016-02-26
Toluene		1	mg/L	0.100	0.0994	99	80 - 120	2016-02-26
Ethylbenzene		1	mg/L	0.100	0.104	104	80 - 120	2016-02-26
Xylene		1	mg/L	0.300	0.299	100	80 - 120	2016-02-26

Standard (CCV-2)

QC Batch: 128477

Date Analyzed: 2016-02-26

Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0960	96	80 - 120	2016-02-26
Toluene		1	mg/L	0.100	0.102	102	80 - 120	2016-02-26
Ethylbenzene		1	mg/L	0.100	0.109	109	80 - 120	2016-02-26
Xylene		1	mg/L	0.300	0.300	100	80 - 120	2016-02-26

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike Amount	Pass
BTEX	S 8021B	water	BTEX-2	Benzene	0.000500	Pass
BTEX	S 8021B	water	BTEX-2	Toluene	0.000500	Pass
BTEX	S 8021B	water	BTEX-2	Ethylbenzene	0.000500	Pass
BTEX	S 8021B	water	BTEX-2	Xylene	0.000500	Pass

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	NELAP	T104704392-14-8	Midland
2		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.

LAB Order ID # 160022401

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
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1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750
Fax (972) 242-7750

email: lab@traceanalysis.com

Company Name: TRC Phone #: (432) 520-7720
Address: (Street, City, Zip) 2057 Commerce Dr Midland Tx 79703
Contact Person: Curt Stanley E-mail:
Invoice to: Flains
(If different from above)
Project #: 432

Project Name: Bob Duham
Project Location (including state):
Sampler Signature: [Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME
44886	MW1	3	DAX	X				X				X	2/22/16	1618	
44887	MW13													1646	
44888	MW2													1723	
44889	MW32													1744	
44890	MW38												2/23/16	1135	
44891	MW4													1207	
44892	MW56													1225	
44893	MW5													1301	
44894	MW12													1338	

Relinquished by: <u>Monica</u>	Company: <u>TRC</u>	Date: <u>2/24/16</u>	Time: <u>0812</u>	Received by: <u>[Signature]</u>	Company: <u>TRC</u>	Date: <u>2/24/16</u>	Time: <u>8:12</u>	INST: <u>OBS</u>	Time: <u>8:12</u>	INST: <u>OBS</u>
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST: <u>COR</u>	Time:	INST: <u>COR</u>
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST: <u>OBS</u>	Time:	INST: <u>OBS</u>
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST: <u>COR</u>	Time:	INST: <u>COR</u>

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-In-Review
Dry Weight Basis Required
TRRP Report Required
Check If Special Reporting Limits Are Needed

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021 / 602 / 8260 / 624	X
BTEX 8021 / 602 / 8260 / 624	
TPH 418.1 / TX1005 / TX1005 Ext(C35)	
TPH 8015 GRO / DRO / TVHC	
PAH 8270 / 625	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260 / 624	
GC/MS Semi. Vol. 8270 / 625	
PCB's 8082 / 608	
Pesticides 8081 / 608	
BOD, TSS, pH	
Moisture Content	
Cl, F, SO ₄ , NO ₃ , N, NO ₂ , N, PO ₄ , P, Alkalinity	
Na, Ca, Mg, K, TDS, EC	
Turn Around Time if different from standard	

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

Carrier # 6012



6701 Aberdeen Avenue, Suite 9
200 East Sunset Road, Suite E
5002 Basin Street, Suite A1
(BioAquatic) 2501 Mayes Rd., Suite 100

Lubbock, Texas 79424
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800-378-1296 806-794-1296 FAX 806-794-1268
915-585-3443 FAX 915-585-4944
432-689-6301 FAX 432-689-6313
972-242-7750

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

(Corrected Report)

Curt Stanley
TRC Solutions
2057 Commerce
Midland, Tx, 79703

Report Date: June 14, 2016

Work Order: 16060203



Project Name: Bob Durham
Project Number: TNM-LF-2000-7

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
420391	MW 15	water	2016-05-31	15:55	2016-06-02
420392	MW 3	water	2016-05-31	16:23	2016-06-02
420393	MW 31	water	2016-05-31	16:43	2016-06-02
420394	MW 37	water	2016-05-31	17:05	2016-06-02
420395	MW 6	water	2016-05-31	17:33	2016-06-02
420396	MW 7	water	2016-05-31	17:50	2016-06-02
420397	MW 8	water	2016-06-01	11:04	2016-06-02
420398	MW 10	water	2016-06-01	11:23	2016-06-02
420399	MW 16	water	2016-06-01	12:12	2016-06-02
420400	MW 1	water	2016-06-01	12:59	2016-06-02
420401	MW 13	water	2016-06-01	13:18	2016-06-02
420402	MW 2	water	2016-06-01	14:06	2016-06-02
420403	MW 32	water	2016-06-01	14:27	2016-06-02
420404	MW 38	water	2016-06-01	14:45	2016-06-02
420405	MW 4	water	2016-06-01	15:08	2016-06-02
420406	MW 56	water	2016-06-01	15:41	2016-06-02
420407	MW 5	water	2016-06-01	16:09	2016-06-02
420408	MW 12	water	2016-06-01	16:43	2016-06-02

Report Corrections (Work Order 16060203)

- 6/14/16: Reran BTEX on sample 420402.

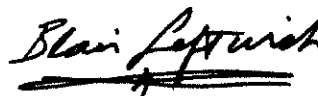
These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

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 25 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Notes:

For inorganic analyses, the term MQL should actually read PQL.



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

Report Contents

Case Narrative	5
Analytical Report	6
Sample 420391 (MW 15)	6
Sample 420392 (MW 3)	6
Sample 420393 (MW 31)	6
Sample 420394 (MW 37)	7
Sample 420395 (MW 6)	7
Sample 420396 (MW 7)	8
Sample 420397 (MW 8)	8
Sample 420398 (MW 10)	9
Sample 420399 (MW 16)	9
Sample 420400 (MW 1)	10
Sample 420401 (MW 13)	10
Sample 420402 (MW 2)	11
Sample 420403 (MW 32)	11
Sample 420404 (MW 38)	12
Sample 420405 (MW 4)	12
Sample 420406 (MW 56)	13
Sample 420407 (MW 5)	13
Sample 420408 (MW 12)	14
Method Blanks	15
QC Batch 130546 - Method Blank (1)	15
QC Batch 130573 - Method Blank (1)	15
QC Batch 130739 - Method Blank (1)	15
Laboratory Control Spikes	17
QC Batch 130546 - LCS (1)	17
QC Batch 130573 - LCS (1)	17
QC Batch 130739 - LCS (1)	18
Matrix Spikes	19
QC Batch 130546 - MS (1)	19
QC Batch 130573 - MS (1)	19
QC Batch 130739 - MS (1)	20
Calibration Standards	21
QC Batch 130546 - CCV (1)	21
QC Batch 130546 - CCV (2)	21
QC Batch 130546 - CCV (3)	21
QC Batch 130573 - CCV (1)	21
QC Batch 130573 - CCV (2)	22
QC Batch 130739 - CCV (2)	22
QC Batch 130739 - CCV (3)	22
Limits of Detection (LOD)	23
Appendix	24
Report Definitions	24

Laboratory Certifications	24
Standard Flags	24
Attachments	24

Case Narrative

Samples for project Bob Durham were received by TraceAnalysis, Inc. on 2016-06-02 and assigned to work order 16060203. Samples for work order 16060203 were received intact at a temperature of 8.7 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	110600	2016-06-05 at 07:42	130546	2016-06-06 at 09:44
BTEX	S 8021B	110609	2016-06-06 at 11:02	130573	2016-06-07 at 07:09
BTEX	S 8021B	110793	2016-06-13 at 10:05	130739	2016-06-14 at 10:05

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 16060203 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: 420391 - MW 15

Laboratory: Midland

Analysis: BTEX

QC Batch: 130546

Prep Batch: 110600

Analytical Method: S 8021B

Date Analyzed: 2016-06-06

Sample Preparation: 2016-06-05

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	s	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	s	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	s	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	s	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0926	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0753	mg/L	1	0.100	75	70 - 130

Sample: 420392 - MW 3

Laboratory: Midland

Analysis: BTEX

QC Batch: 130546

Prep Batch: 110600

Analytical Method: S 8021B

Date Analyzed: 2016-06-06

Sample Preparation: 2016-06-05

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	s	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	s	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	s	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	s	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0915	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0741	mg/L	1	0.100	74	70 - 130

Sample: 420393 - MW 31

Laboratory: Midland
Analysis: BTEX
QC Batch: 130546
Prep Batch: 110600

Analytical Method: S 8021B
Date Analyzed: 2016-06-06
Sample Preparation: 2016-06-05

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

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	s	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	s	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	s	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	s	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0920	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0742	mg/L	1	0.100	74	70 - 130

Sample: 420394 - MW 37

Laboratory: Midland
Analysis: BTEX
QC Batch: 130546
Prep Batch: 110600

Analytical Method: S 8021B
Date Analyzed: 2016-06-06
Sample Preparation: 2016-06-05

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

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	s	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	s	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	s	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	s	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0889	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0701	mg/L	1	0.100	70	70 - 130

Sample: 420395 - MW 6

Laboratory: Midland
Analysis: BTEX
QC Batch: 130546

Analytical Method: S 8021B
Date Analyzed: 2016-06-06

Prep Method: S 5030B
Analyzed By: AK

Report Date: June 14, 2016
TNM-LF-2000-7

Work Order: 16060203
Bob Durham

Page Number: 8 of 25

Prep Batch: 110600

Sample Preparation: 2016-06-05

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	5	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	5	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	5	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	5	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0882	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0737	mg/L	1	0.100	74	70 - 130

Sample: 420396 - MW 7

Laboratory: Midland

Analysis: BTEX

QC Batch: 130546

Prep Batch: 110600

Analytical Method: S 8021B

Date Analyzed: 2016-06-06

Sample Preparation: 2016-06-05

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	5	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	5	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	5	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	5	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0905	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0753	mg/L	1	0.100	75	70 - 130

Sample: 420397 - MW 8

Laboratory: Midland

Analysis: BTEX

QC Batch: 130546

Prep Batch: 110600

Analytical Method: S 8021B

Date Analyzed: 2016-06-06

Sample Preparation: 2016-06-05

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	5	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	5	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	5	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	5	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0911	mg/L	1	0.100	91	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0720	mg/L	1	0.100	72	70 - 130

Sample: 420398 - MW 10

Laboratory: Midland

Analysis: BTEX

QC Batch: 130546

Prep Batch: 110600

Analytical Method: S 8021B

Date Analyzed: 2016-06-06

Sample Preparation: 2016-06-05

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	5	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	5	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	5	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	5	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0891	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0724	mg/L	1	0.100	72	70 - 130

Sample: 420399 - MW 16

Laboratory: Midland

Analysis: BTEX

QC Batch: 130546

Prep Batch: 110600

Analytical Method: S 8021B

Date Analyzed: 2016-06-06

Sample Preparation: 2016-06-05

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene		5	0.00100	0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504

continued ...

Report Date: June 14, 2016
TNM-LF-2000-7

Work Order: 16060203
Bob Durham

Page Number: 10 of 25

sample 420399 continued ...

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Toluene	u	s	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	s	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	s	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0875	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0816	mg/L	1	0.100	82	70 - 130

Sample: 420400 - MW 1

Laboratory: Midland

Analysis: BTEX

QC Batch: 130546

Prep Batch: 110600

Analytical Method: S 8021B

Date Analyzed: 2016-06-06

Sample Preparation: 2016-06-05

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	s	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	s	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	s	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	s	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0899	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0772	mg/L	1	0.100	77	70 - 130

Sample: 420401 - MW 13

Laboratory: Midland

Analysis: BTEX

QC Batch: 130546

Prep Batch: 110600

Analytical Method: S 8021B

Date Analyzed: 2016-06-06

Sample Preparation: 2016-06-05

Prep Method: S 5030B

Analyzed By: AK

Prepared By: AK

continued ...

sample 420401 continued . . .

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	J	5	0.000600	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	U	5	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	U	5	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	U	5	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0896	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0851	mg/L	1	0.100	85	70 - 130

Sample: 420402 - MW 2

Laboratory: Midland
Analysis: BTEX
QC Batch: 130739
Prep Batch: 110793

Analytical Method: S 8021B
Date Analyzed: 2016-06-14
Sample Preparation: 2016-06-13

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

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	J,Qr	5	0.000800	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	Qr,U	5	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	Qr,U	5	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	Qr,U	5	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0980	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0957	mg/L	1	0.100	96	70 - 130

Sample: 420403 - MW 32

Laboratory: Midland
Analysis: BTEX
QC Batch: 130546
Prep Batch: 110600

Analytical Method: S 8021B
Date Analyzed: 2016-06-06
Sample Preparation: 2016-06-05

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

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	5	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	5	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	5	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	5	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0889	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0733	mg/L	1	0.100	73	70 - 130

Sample: 420404 - MW 38

Laboratory: Midland
Analysis: BTEX
QC Batch: 130573
Prep Batch: 110609

Analytical Method: S 8021B
Date Analyzed: 2016-06-07
Sample Preparation:

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

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	5	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	5	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	5	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	5	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0896	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0789	mg/L	1	0.100	79	70 - 130

Sample: 420405 - MW 4

Laboratory: Midland
Analysis: BTEX
QC Batch: 130573
Prep Batch: 110609

Analytical Method: S 8021B
Date Analyzed: 2016-06-07
Sample Preparation:

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

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	5	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504

continued ...

sample 420405 continued . . .

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Toluene	u	s	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	s	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	s	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0924	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0824	mg/L	1	0.100	82	70 - 130

Sample: 420406 - MW 56

Laboratory: Midland
Analysis: BTEX
QC Batch: 130573
Prep Batch: 110609

Analytical Method: S 8021B
Date Analyzed: 2016-06-07
Sample Preparation:

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

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	s	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	s	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	s	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	s	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0960	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0795	mg/L	1	0.100	80	70 - 130

Sample: 420407 - MW 5

Laboratory: Midland
Analysis: BTEX
QC Batch: 130573
Prep Batch: 110609

Analytical Method: S 8021B
Date Analyzed: 2016-06-07
Sample Preparation:

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

continued . . .

sample 420407 continued ...

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	5	<0.000504	<0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	5	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene	u	5	<0.000763	<0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	u	5	<0.000256	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0970	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0935	mg/L	1	0.100	94	70 - 130

Sample: 420408 - MW 12

Laboratory: Midland
Analysis: BTEX
QC Batch: 130573
Prep Batch: 110609

Analytical Method: S 8021B
Date Analyzed: 2016-06-07
Sample Preparation:

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

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene		5	0.00100	0.00100	<0.000504	mg/L	1	0.000504	0.001	0.000504
Toluene	u	5	<0.000621	<0.00100	<0.000621	mg/L	1	0.000621	0.001	0.000621
Ethylbenzene		5	0.00100	0.00100	<0.000763	mg/L	1	0.000763	0.001	0.000763
Xylene	j	5	0.000700	<0.00100	<0.000256	mg/L	1	0.000256	0.001	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0927	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)			0.109	mg/L	1	0.100	109	70 - 130

Method Blanks

Method Blank (1)

QC Batch: 130546
Prep Batch: 110600

Date Analyzed: 2016-06-06
QC Preparation: 2016-06-05

Analyzed By: AK
Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
Benzene		s	<0.000504	mg/L	0.000504
Toluene		s	<0.000621	mg/L	0.000621
Ethylbenzene		s	<0.000763	mg/L	0.000763
Xylene		s	<0.000256	mg/L	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0964	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0832	mg/L	1	0.100	83	70 - 130

Method Blank (1)

QC Batch: 130573
Prep Batch: 110609

Date Analyzed: 2016-06-07
QC Preparation: 2016-06-06

Analyzed By: AK
Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
Benzene		s	<0.000504	mg/L	0.000504
Toluene		s	<0.000621	mg/L	0.000621
Ethylbenzene		s	<0.000763	mg/L	0.000763
Xylene		s	<0.000256	mg/L	0.000256

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0891	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0710	mg/L	1	0.100	71	70 - 130

Method Blank (1)

QC Batch: 130739
Prep Batch: 110793

Date Analyzed: 2016-06-14
QC Preparation: 2016-06-13

Analyzed By: AK
Prepared By: AK

Report Date: June 14, 2016
TNM-LF-2000-7

Work Order: 16060203
Bob Durham

Page Number: 16 of 25

Parameter	F	C	Result	Units	Reporting Limits
Benzene		s	<0.000504	mg/L	0.000504
Toluene		s	<0.000621	mg/L	0.000621
Ethylbenzene		s	<0.000763	mg/L	0.000763
Xylene		s	<0.000256	mg/L	0.000256

Surrogate	F	C	Result	Units	Dilntion	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0993	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0881	mg/L	1	0.100	88	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 130546
Prep Batch: 110600

Date Analyzed: 2016-06-06
QC Preparation: 2016-06-05

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.104	mg/L	1	0.100	<0.000504	104	70 - 130
Toluene		5	0.108	mg/L	1	0.100	<0.000621	108	70 - 130
Ethylbenzene		5	0.109	mg/L	1	0.100	<0.000763	109	70 - 130
Xylene		5	0.326	mg/L	1	0.300	<0.000256	109	70 - 130

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

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.100	mg/L	1	0.100	<0.000504	100	70 - 130	4	20
Toluene		5	0.103	mg/L	1	0.100	<0.000621	103	70 - 130	5	20
Ethylbenzene		5	0.103	mg/L	1	0.100	<0.000763	103	70 - 130	6	20
Xylene		5	0.307	mg/L	1	0.300	<0.000256	102	70 - 130	6	20

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

Surrogate	F	C	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.101	0.0972	mg/L	1	0.100	101	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.105	0.103	mg/L	1	0.100	105	103	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 130573
Prep Batch: 110609

Date Analyzed: 2016-06-07
QC Preparation: 2016-06-06

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0958	mg/L	1	0.100	<0.000504	96	70 - 130
Toluene		5	0.0980	mg/L	1	0.100	<0.000621	98	70 - 130
Ethylbenzene		5	0.100	mg/L	1	0.100	<0.000763	100	70 - 130
Xylene		5	0.297	mg/L	1	0.300	<0.000256	99	70 - 130

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

continued ...

control spikes continued . . .

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.0980	mg/L	1	0.100	<0.000504	98	70 - 130	2	20
Toluene		5	0.101	mg/L	1	0.100	<0.000621	101	70 - 130	3	20
Ethylbenzene		5	0.101	mg/L	1	0.100	<0.000763	101	70 - 130	1	20
Xylene		5	0.303	mg/L	1	0.300	<0.000256	101	70 - 130	2	20

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

Surrogate	F	C	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0888	0.0935	mg/L	1	0.100	89	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0919	0.0954	mg/L	1	0.100	92	95	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 130739
Prep Batch: 110793

Date Analyzed: 2016-06-14
QC Preparation: 2016-06-13

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0998	mg/L	1	0.100	<0.000504	100	70 - 130
Toluene		5	0.103	mg/L	1	0.100	<0.000621	103	70 - 130
Ethylbenzene		5	0.105	mg/L	1	0.100	<0.000763	105	70 - 130
Xylene		5	0.316	mg/L	1	0.300	<0.000256	105	70 - 130

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

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.101	mg/L	1	0.100	<0.000504	101	70 - 130	1	20
Toluene		5	0.105	mg/L	1	0.100	<0.000621	105	70 - 130	2	20
Ethylbenzene		5	0.107	mg/L	1	0.100	<0.000763	107	70 - 130	2	20
Xylene		5	0.322	mg/L	1	0.300	<0.000256	107	70 - 130	2	20

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

Surrogate	F	C	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0974	0.0979	mg/L	1	0.100	97	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.104	0.105	mg/L	1	0.100	104	105	70 - 130

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 420268

QC Batch: 130546
Prep Batch: 110600

Date Analyzed: 2016-06-06
QC Preparation: 2016-06-05

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0981	mg/L	1	0.100	<0.000504	98	70 - 130
Toluene		5	0.101	mg/L	1	0.100	<0.000621	101	70 - 130
Ethylbenzene		5	0.102	mg/L	1	0.100	<0.000763	102	70 - 130
Xylene		5	0.299	mg/L	1	0.300	<0.000256	100	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
Benzene		5	0.104	mg/L	1	0.100	<0.000504	104	70 - 130	6	20
Toluene		5	0.108	mg/L	1	0.100	<0.000621	108	70 - 130	7	20
Ethylbenzene		5	0.109	mg/L	1	0.100	<0.000763	109	70 - 130	7	20
Xylene		5	0.327	mg/L	1	0.300	<0.000256	109	70 - 130	9	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0979	0.0983	mg/L	1	0.1	98	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.102	0.104	mg/L	1	0.1	102	104	70 - 130

Matrix Spike (MS-1) Spiked Sample: 420404

QC Batch: 130573
Prep Batch: 110609

Date Analyzed: 2016-06-07
QC Preparation: 2016-06-06

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.100	mg/L	1	0.100	<0.000504	100	70 - 130
Toluene		5	0.103	mg/L	1	0.100	<0.000621	103	70 - 130
Ethylbenzene		5	0.102	mg/L	1	0.100	<0.000763	102	70 - 130
Xylene		5	0.304	mg/L	1	0.300	<0.000256	101	70 - 130

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

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.100	mg/L	1	0.100	<0.000504	100	70 - 130	0	20
Toluene		5	0.103	mg/L	1	0.100	<0.000621	103	70 - 130	0	20
Ethylbenzene		5	0.105	mg/L	1	0.100	<0.000763	105	70 - 130	3	20
Xylene		5	0.315	mg/L	1	0.300	<0.000256	105	70 - 130	4	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.0929	0.0905	mg/L	1	0.1	93	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0996	0.100	mg/L	1	0.1	100	100	70 - 130

Matrix Spike (MS-1) Spiked Sample: 421148

QC Batch: 130739
Prep Batch: 110793

Date Analyzed: 2016-06-14
QC Preparation: 2016-06-13

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0831	mg/L	1	0.100	<0.000504	83	70 - 130
Toluene		5	0.0965	mg/L	1	0.100	<0.000621	96	70 - 130
Ethylbenzene		5	0.102	mg/L	1	0.100	<0.000763	102	70 - 130
Xylene		5	0.304	mg/L	1	0.300	<0.000256	101	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
Benzene	Qr, Qs	5	0.0628	mg/L	1	0.100	<0.000504	63	70 - 130	28	20
Toluene	Qr	5	0.0746	mg/L	1	0.100	<0.000621	75	70 - 130	26	20
Ethylbenzene	Qr	5	0.0805	mg/L	1	0.100	<0.000763	80	70 - 130	24	20
Xylene	Qr	5	0.241	mg/L	1	0.300	<0.000256	80	70 - 130	23	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			0.100	0.101	mg/L	1	0.1	100	101	70 - 130
4-Bromofluorobenzene (4-BFB)			0.106	0.106	mg/L	1	0.1	106	106	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 130546

Date Analyzed: 2016-06-06

Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0992	99	80 - 120	2016-06-06
Toluene		5	mg/L	0.100	0.104	104	80 - 120	2016-06-06
Ethylbenzene		5	mg/L	0.100	0.103	103	80 - 120	2016-06-06
Xylene		5	mg/L	0.300	0.310	103	80 - 120	2016-06-06

Standard (CCV-2)

QC Batch: 130546

Date Analyzed: 2016-06-06

Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0999	100	80 - 120	2016-06-06
Toluene		5	mg/L	0.100	0.101	101	80 - 120	2016-06-06
Ethylbenzene		5	mg/L	0.100	0.101	101	80 - 120	2016-06-06
Xylene		5	mg/L	0.300	0.295	98	80 - 120	2016-06-06

Standard (CCV-3)

QC Batch: 130546

Date Analyzed: 2016-06-06

Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0941	94	80 - 120	2016-06-06
Toluene		5	mg/L	0.100	0.0957	96	80 - 120	2016-06-06
Ethylbenzene		5	mg/L	0.100	0.0956	96	80 - 120	2016-06-06
Xylene		5	mg/L	0.300	0.282	94	80 - 120	2016-06-06

Standard (CCV-1)

QC Batch: 130573

Date Analyzed: 2016-06-07

Analyzed By: AK

Report Date: June 14, 2016
TNM-LF-2000-7

Work Order: 16060203
Bob Durham

Page Number: 22 of 25

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		s	mg/L	0.100	0.0941	94	80 - 120	2016-06-07
Toluene		s	mg/L	0.100	0.0957	96	80 - 120	2016-06-07
Ethylbenzene		s	mg/L	0.100	0.0956	96	80 - 120	2016-06-07
Xylene		s	mg/L	0.300	0.282	94	80 - 120	2016-06-07

Standard (CCV-2)

QC Batch: 130573

Date Analyzed: 2016-06-07

Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		s	mg/L	0.100	0.0947	95	80 - 120	2016-06-07
Toluene		s	mg/L	0.100	0.0971	97	80 - 120	2016-06-07
Ethylbenzene		s	mg/L	0.100	0.0949	95	80 - 120	2016-06-07
Xylene		s	mg/L	0.300	0.285	95	80 - 120	2016-06-07

Standard (CCV-2)

QC Batch: 130739

Date Analyzed: 2016-06-14

Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		s	mg/L	0.100	0.0999	100	80 - 120	2016-06-14
Toluene		s	mg/L	0.100	0.103	103	80 - 120	2016-06-14
Ethylbenzene		s	mg/L	0.100	0.101	101	80 - 120	2016-06-14
Xylene		s	mg/L	0.300	0.302	101	80 - 120	2016-06-14

Standard (CCV-3)

QC Batch: 130739

Date Analyzed: 2016-06-14

Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		s	mg/L	0.100	0.0989	99	80 - 120	2016-06-14
Toluene		s	mg/L	0.100	0.102	102	80 - 120	2016-06-14
Ethylbenzene		s	mg/L	0.100	0.102	102	80 - 120	2016-06-14
Xylene		s	mg/L	0.300	0.301	100	80 - 120	2016-06-14

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike	Pass
					Amount	
BTEX	S 8021B	water	BTEX-2	Benzene	0.000768	Pass
BTEX	S 8021B	water	BTEX-2	Tolnene	0.000768	Pass
BTEX	S 8021B	water	BTEX-2	Ethylbenzene	0.000768	Pass
BTEX	S 8021B	water	BTEX-2	Xylene	0.000768	Pass

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
SQL	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	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-16-12	Lubbock
5	NELAP	T104704392-14-8	Midland
6		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 SQL. 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.

email: lab@traceanalysis.com

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BioAqualic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750
Tel (575) 392-7561
Fax (575) 392-4508

Company Name: TAC Solutions Phone #: Address: (Street, City, Zip) Fax #: Contact Person: Curt Stanley E-mail: Invoice to: Plains Project #: TNM-LF-2000-7 Project Location (including state):

Project Name: Bob Durham
Sampler Signature: [Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME
391	MW 15	3	10A	X				X					X	5/3/16	1555
392	MW 3														1623
393	MW 31														1643
394	MW 37														1705
395	MW 6														1733
396	MW 7														1750
397	MW 8													6/1/16	1104
398	MW 10														1123
399	MW 16														1212
400	MW 1														1259
401	MW 13														1318

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:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST:	OBS:	COR:

LAB USE ONLY

Intact Y / N

Headspace Y / N / NA

Log-in-Review

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE	8021 / 602 / 8260 / 624
BTEX	8021 / 602 / 8260 / 624
TPH	418.1 / TX1005 / TX1005 Exl(C35)
TPH	8015 GRO / DRO / TVHC
PAH	8270 / 625
Total Metals	Ag As Ba Cd Cr Pb Se Hg 6010/200.7
TCLP Metals	Ag As Ba Cd Cr Pb Se Hg
TCLP Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol.	8260 / 624
GC/MS Semi. Vol.	8270 / 625
PCBs	8082 / 608
Pesticides	8081 / 608
BOD, TSS, pH	
Moisture Content	
Cl, F, SO ₄ , NO ₃ -N, NO ₂ -N, PO ₄ -P, Alkalinity	
Na, Ca, Mg, K, TDS, EC	
Turn Around Time if different from standard	

REMARKS:

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

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TraceAnalysis, Inc.

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BioAqualic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750
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email: lab@traceanalysis.com

Company Name: TRC Solutions Phone #: 432) 520-7720
Address: (Street, City, Zip) 2057 Commerce Dr Midland Tx 79703
Contact Person: Curt Stanley E-mail: MidlandTx79703

Invoice to: (If different from above)
Project #: TNM-LF-2000-7 Project Name: Bob Duhon
Project Location (including state):
Sampler Signature: Manuel

Wanted

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX			PRESERVATIVE METHOD						SAMPLING		
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME
20402	MW 0	3	VOA	X				X					X	4/16	1406
403	MW 30														1427
404	MW 38														1445
405	MW 4														1508
406	MW 56														1541
407	MW 5														1609
408	MW 12														1643

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE	8021 / 602 / 8260 / 624	
BTEX	8021 / 602 / 8260 / 624	X
TPH 418 / 1 / TX1005 / TX1005 Ex(C35)		
TPH 8015 GRO / DRO / TVHC		
PAH 8270 / 625		
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7		
TCLP Metals Ag As Ba Cd Cr Pb Se Hg		
TCLP Volatiles		
TCLP Semi Volatiles		
RCI		
GC/MS Vol. 8260 / 624		
GC/MS Semi. Vol. 8270 / 625		
PCBs 8082 / 608		
Pesticides 8081 / 608		
BOD, TSS, pH		
Moisture Content		
Cl, F, SO ₄ , NO ₃ -N, NO ₂ -N, PO ₄ -P, Alkalinity		
Na, Ca, Mg, K, TDS, EC		
Turn Around Time if different from standard		

Relinquished by: <u>Manuel</u>	Company: <u>TRC</u>	Date: <u>6-2-16</u>	Time: <u>0828</u>	Received by: <u>Manuel H TA</u>	Company: <u>TA</u>	Date: <u>6-2-16</u>	Time: <u>8:28</u>	INST: <u>1406</u>	OBS: <u>1427</u>	COR: <u>1445</u>
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:



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(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
E-Mail lab@traceanalysis.com WEB www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Curt Stanley
TRC Solutions
2057 Commerce
Midland, Tx, 79703

Report Date: August 19, 2016

Work Order: 16081204



Project Name: Bob Durham
Project Number: TNM-LF-2000-7

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
426299	MW 1	water	2016-08-10	14:10	2016-08-12
426300	MW 13	water	2016-08-10	14:45	2016-08-12
426301	MW 2	water	2016-08-10	15:23	2016-08-12
426302	MW 32	water	2016-08-10	15:50	2016-08-12
426303	MW 38	water	2016-08-10	16:13	2016-08-12
426304	MW 4	water	2016-08-11	11:35	2016-08-12
426305	MW 56	water	2016-08-11	12:08	2016-08-12
426306	MW 5	water	2016-08-11	12:39	2016-08-12
426307	MW 12	water	2016-08-11	13:12	2016-08-12

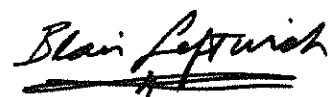
Notes

- **Work Order 16081204:** Received on ice

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 19 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 horizontal line underneath.

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

Report Contents

Case Narrative	4
Analytical Report	5
Sample 426299 (MW 1)	5
Sample 426300 (MW 13)	5
Sample 426301 (MW 2)	5
Sample 426302 (MW 32)	6
Sample 426303 (MW 38)	6
Sample 426304 (MW 4)	7
Sample 426305 (MW 56)	7
Sample 426306 (MW 5)	8
Sample 426307 (MW 12)	8
Method Blanks	10
QC Batch 132158 - Method Blank (1)	10
QC Batch 132159 - Method Blank (1)	10
QC Batch 132208 - Method Blank (1)	10
Laboratory Control Spikes	12
QC Batch 132158 - LCS (1)	12
QC Batch 132159 - LCS (1)	12
QC Batch 132208 - LCS (1)	13
Matrix Spikes	14
QC Batch 132158 - MS (1)	14
QC Batch 132159 - MS (1)	14
QC Batch 132208 - MS (1)	15
Calibration Standards	16
QC Batch 132158 - CCV (2)	16
QC Batch 132158 - CCV (3)	16
QC Batch 132159 - CCV (1)	16
QC Batch 132159 - CCV (2)	16
QC Batch 132208 - CCV (1)	17
QC Batch 132208 - CCV (2)	17
Appendix	18
Report Definitions	18
Laboratory Certifications	18
Standard Flags	18
Attachments	18

Case Narrative

Samples for project Bob Durham were received by TraceAnalysis, Inc. on 2016-08-12 and assigned to work order 16081204. Samples for work order 16081204 were received intact at a temperature of 9.1 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	111999	2016-08-16 at 14:00	132158	2016-08-16 at 14:00
BTEX	S 8021B	112000	2016-08-16 at 14:00	132159	2016-08-16 at 14:00
BTEX	S 8021B	112046	2016-08-18 at 09:25	132208	2016-08-18 at 09:25

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 16081204 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: 426299 - MW 1

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 132208
Prep Batch: 112046

Analytical Method: S 8021B
Date Analyzed: 2016-08-18
Sample Preparation: 2016-08-18

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Xylene		1,2,3,4	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4	0.0974	mg/L	1	0.100	97	71.6 - 120
4-Bromofluorobenzene (4-BFB)		4	0.0982	mg/L	1	0.100	98	70 - 120

Sample: 426300 - MW 13

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 132208
Prep Batch: 112046

Analytical Method: S 8021B
Date Analyzed: 2016-08-18
Sample Preparation: 2016-08-18

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4	0.0994	mg/L	1	0.100	99	71.6 - 120
4-Bromofluorobenzene (4-BFB)		4	0.102	mg/L	1	0.100	102	70 - 120

Report Date: August 19, 2016
TNM-LF-2000-7

Work Order: 16081204
Bob Durham

Page Number: 6 of 19

Sample: 426301 - MW 2

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 132208
Prep Batch: 112046

Analytical Method: S 8021B
Date Analyzed: 2016-08-18
Sample Preparation: 2016-08-18

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4	0.0973	mg/L	1	0.100	97	71.6 - 120
4-Bromofluorobenzene (4-BFB)		4	0.100	mg/L	1	0.100	100	70 - 120

Sample: 426302 - MW 32

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 132158
Prep Batch: 111999

Analytical Method: S 8021B
Date Analyzed: 2016-08-16
Sample Preparation: 2016-08-16

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4	0.0845	mg/L	1	0.100	84	71.6 - 120
4-Bromofluorobenzene (4-BFB)		4	0.0839	mg/L	1	0.100	84	70 - 120

Sample: 426303 - MW 38

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 132159
Prep Batch: 112000

Analytical Method: S 8021B
Date Analyzed: 2016-08-16
Sample Preparation: 2016-08-16

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4	0.0846	mg/L	1	0.100	85	71.6 - 120
4-Bromofluorobenzene (4-BFB)		4	0.0829	mg/L	1	0.100	83	70 - 120

Sample: 426304 - MW 4

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 132208
Prep Batch: 112046

Analytical Method: S 8021B
Date Analyzed: 2016-08-18
Sample Preparation: 2016-08-18

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4	0.0975	mg/L	1	0.100	98	71.6 - 120
4-Bromofluorobenzene (4-BFB)		4	0.0948	mg/L	1	0.100	95	70 - 120

Report Date: August 19, 2016
TNM-LF-2000-7

Work Order: 16081204
Bob Durham

Page Number: 8 of 19

Sample: 426305 - MW 56

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 132159
Prep Batch: 112000

Analytical Method: S 8021B
Date Analyzed: 2016-08-16
Sample Preparation: 2016-08-16

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4	0.0853	mg/L	1	0.100	85	71.6 - 120
4-Bromofluorobenzene (4-BFB)		4	0.0841	mg/L	1	0.100	84	70 - 120

Sample: 426306 - MW 5

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 132208
Prep Batch: 112046

Analytical Method: S 8021B
Date Analyzed: 2016-08-18
Sample Preparation: 2016-08-18

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4	0.0983	mg/L	1	0.100	98	71.6 - 120
4-Bromofluorobenzene (4-BFB)		4	0.100	mg/L	1	0.100	100	70 - 120

Report Date: August 19, 2016
TNM-LF-2000-7

Work Order: 16081204
Bob Durham

Page Number: 9 of 19

Sample: 426307 - MW 12

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 132208

Prep Batch: 112046

Analytical Method: S 8021B

Date Analyzed: 2016-08-18

Sample Preparation: 2016-08-18

Prep Method: S 5030B

Analyzed By: MT

Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1,2,3,4	0.00130	mg/L	1	0.00100
Toluene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4	0.0982	mg/L	1	0.100	98	71.6 - 120
4-Bromofluorobenzene (4-BFB)		4	0.115	mg/L	1	0.100	115	70 - 120

Method Blanks

Method Blank (1) QC Batch: 132158

QC Batch: 132158
Prep Batch: 111999

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

Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4	<0.000223	mg/L	0.001
Toluene		1,2,3,4	<0.000238	mg/L	0.001
Ethylbenzene		1,2,3,4	<0.000238	mg/L	0.001
Xylene		1,2,3,4	<0.000243	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4	0.0901	mg/L	1	0.100	90	71.6 - 120
4-Bromofluorobenzene (4-BFB)		4	0.0872	mg/L	1	0.100	87	70 - 120

Method Blank (1) QC Batch: 132159

QC Batch: 132159
Prep Batch: 112000

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

Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4	<0.000223	mg/L	0.001
Toluene		1,2,3,4	<0.000238	mg/L	0.001
Ethylbenzene		1,2,3,4	<0.000238	mg/L	0.001
Xylene		1,2,3,4	<0.000243	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4	0.0912	mg/L	1	0.100	91	71.6 - 120
4-Bromofluorobenzene (4-BFB)		4	0.0882	mg/L	1	0.100	88	70 - 120

Method Blank (1) QC Batch: 132208

QC Batch: 132208
Prep Batch: 112046

Date Analyzed: 2016-08-18
QC Preparation: 2016-08-18

Analyzed By: MT
Prepared By: MT

Report Date: August 19, 2016
TNM-LF-2000-7

Work Order: 16081204
Bob Durham

Page Number: 11 of 19

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4	<0.000223	mg/L	0.001
Toluene		1,2,3,4	<0.000238	mg/L	0.001
Ethylbenzene		1,2,3,4	<0.000238	mg/L	0.001
Xylene		1,2,3,4	<0.000243	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4	0.103	mg/L	1	0.100	103	71.6 - 120
4-Bromofluorobenzene (4-BFB)		4	0.101	mg/L	1	0.100	101	70 - 120

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 132158
Prep Batch: 111999

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

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4	0.0867	mg/L	1	0.100	<0.000223	87	78.9 - 120
Toluene		1,2,3,4	0.0822	mg/L	1	0.100	<0.000238	82	79.8 - 120
Ethylbenzene		1,2,3,4	0.0893	mg/L	1	0.100	<0.000238	89	79.7 - 120
Xylene		1,2,3,4	0.268	mg/L	1	0.300	<0.000243	89	78.2 - 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
Benzene		1,2,3,4	0.0875	mg/L	1	0.100	<0.000223	88	78.9 - 120	1	20
Toluene		1,2,3,4	0.0835	mg/L	1	0.100	<0.000238	84	79.8 - 120	2	20
Ethylbenzene		1,2,3,4	0.0925	mg/L	1	0.100	<0.000238	92	79.7 - 120	4	20
Xylene		1,2,3,4	0.278	mg/L	1	0.300	<0.000243	93	78.2 - 120	4	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)	4	0.0910	0.0899	mg/L	1	0.100	91	90	71.6 - 120
4-Bromofluorobenzene (4-BFB)	4	0.0895	0.0904	mg/L	1	0.100	90	90	70 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 132159
Prep Batch: 112000

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

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4	0.0899	mg/L	1	0.100	<0.000223	90	78.9 - 120
Toluene		1,2,3,4	0.0853	mg/L	1	0.100	<0.000238	85	79.8 - 120
Ethylbenzene		1,2,3,4	0.0932	mg/L	1	0.100	<0.000238	93	79.7 - 120
Xylene		1,2,3,4	0.280	mg/L	1	0.300	<0.000243	93	78.2 - 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
Benzene		1,2,3,4	0.0876	mg/L	1	0.100	<0.000223	88	78.9 - 120	3	20
Toluene		1,2,3,4	0.0832	mg/L	1	0.100	<0.000238	83	79.8 - 120	2	20
Ethylbenzene		1,2,3,4	0.0917	mg/L	1	0.100	<0.000238	92	79.7 - 120	2	20
Xylene		1,2,3,4	0.277	mg/L	1	0.300	<0.000243	92	78.2 - 120	1	20

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

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	4	0.0916	0.0917	mg/L	1	0.100	92	92	71.6 - 120
4-Bromofluorobenzene (4-BFB)	4	0.0912	0.0924	mg/L	1	0.100	91	92	70 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 132208
Prep Batch: 112046

Date Analyzed: 2016-08-18
QC Preparation: 2016-08-18

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4	0.0981	mg/L	1	0.100	<0.000223	98	78.9 - 120
Toluene		1,2,3,4	0.0939	mg/L	1	0.100	<0.000238	94	79.8 - 120
Ethylbenzene		1,2,3,4	0.104	mg/L	1	0.100	<0.000238	104	79.7 - 120
Xylene		1,2,3,4	0.316	mg/L	1	0.300	<0.000243	105	78.2 - 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
Benzene		1,2,3,4	0.101	mg/L	1	0.100	<0.000223	101	78.9 - 120	3	20
Toluene		1,2,3,4	0.0963	mg/L	1	0.100	<0.000238	96	79.8 - 120	2	20
Ethylbenzene		1,2,3,4	0.106	mg/L	1	0.100	<0.000238	106	79.7 - 120	2	20
Xylene		1,2,3,4	0.320	mg/L	1	0.300	<0.000243	107	78.2 - 120	1	20

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

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	4	0.104	0.104	mg/L	1	0.100	104	104	71.6 - 120
4-Bromofluorobenzene (4-BFB)	4	0.107	0.106	mg/L	1	0.100	107	106	70 - 120

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 426302

QC Batch: 132158
Prep Batch: 111999

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

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4	0.0821	mg/L	1	0.100	<0.000223	82	18.2 - 149
Toluene		1,2,3,4	0.0785	mg/L	1	0.100	<0.000238	78	13 - 157
Ethylbenzene		1,2,3,4	0.0866	mg/L	1	0.100	<0.000238	87	12.9 - 156
Xylene		1,2,3,4	0.261	mg/L	1	0.300	<0.000243	87	22 - 150

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
Benzene		1,2,3,4	0.0832	mg/L	1	0.100	<0.000223	83	18.2 - 149	1	20
Toluene		1,2,3,4	0.0793	mg/L	1	0.100	<0.000238	79	13 - 157	1	20
Ethylbenzene		1,2,3,4	0.0878	mg/L	1	0.100	<0.000238	88	12.9 - 156	1	20
Xylene		1,2,3,4	0.266	mg/L	1	0.300	<0.000243	89	22 - 150	2	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)	4	0.0848	0.0851	mg/L	1	0.1	85	85	71.6 - 120
4-Bromofluorobenzene (4-BFB)	4	0.0867	0.0878	mg/L	1	0.1	87	88	70 - 120

Matrix Spike (MS-1) Spiked Sample: 426305

QC Batch: 132159
Prep Batch: 112000

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

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4	0.0815	mg/L	1	0.100	<0.000223	82	18.2 - 149
Toluene		1,2,3,4	0.0773	mg/L	1	0.100	<0.000238	77	13 - 157
Ethylbenzene		1,2,3,4	0.0846	mg/L	1	0.100	<0.000238	85	12.9 - 156
Xylene		1,2,3,4	0.254	mg/L	1	0.300	<0.000243	85	22 - 150

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
Benzene		1,2,3,4	0.0854	mg/L	1	0.100	<0.000223	85	18.2 - 149	5	20
Toluene		1,2,3,4	0.0814	mg/L	1	0.100	<0.000238	81	13 - 157	5	20
Ethylbenzene		1,2,3,4	0.0897	mg/L	1	0.100	<0.000238	90	12.9 - 156	6	20
Xylene		1,2,3,4	0.270	mg/L	1	0.300	<0.000243	90	22 - 150	6	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)	4	0.0855	0.0856	mg/L	1	0.1	86	86	71.6 - 120
4-Bromofluorobenzene (4-BFB)	4	0.0867	0.0867	mg/L	1	0.1	87	87	70 - 120

Matrix Spike (MS-1) Spiked Sample: 426569

QC Batch: 132208
Prep Batch: 112046

Date Analyzed: 2016-08-18
QC Preparation: 2016-08-18

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4	0.508	mg/L	5	0.500	<0.00112	102	18.2 - 149
Toluene		1,2,3,4	0.491	mg/L	5	0.500	<0.00119	98	13 - 157
Ethylbenzene		1,2,3,4	0.587	mg/L	5	0.500	0.0475	108	12.9 - 156
Xylene		1,2,3,4	1.67	mg/L	5	1.50	0.0092	111	22 - 150

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
Benzene		1,2,3,4	0.514	mg/L	5	0.500	<0.00112	103	18.2 - 149	1	20
Toluene		1,2,3,4	0.498	mg/L	5	0.500	<0.00119	100	13 - 157	1	20
Ethylbenzene		1,2,3,4	0.583	mg/L	5	0.500	0.0475	107	12.9 - 156	1	20
Xylene		1,2,3,4	1.62	mg/L	5	1.50	0.0092	107	22 - 150	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
Trifluorotoluene (TFT)	4	0.549	0.553	mg/L	5	0.5	110	111	71.6 - 120
4-Bromofluorobenzene (4-BFB)	4	0.558	0.543	mg/L	5	0.5	112	109	70 - 120

Calibration Standards

Standard (CCV-2)

QC Batch: 132158

Date Analyzed: 2016-08-16

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4	mg/L	0.100	0.0879	88	80 - 120	2016-08-16
Toluene		1,2,3,4	mg/L	0.100	0.0835	84	80 - 120	2016-08-16
Ethylbenzene		1,2,3,4	mg/L	0.100	0.0925	92	80 - 120	2016-08-16
Xylene		1,2,3,4	mg/L	0.300	0.278	93	80 - 120	2016-08-16

Standard (CCV-3)

QC Batch: 132158

Date Analyzed: 2016-08-16

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4	mg/L	0.100	0.0901	90	80 - 120	2016-08-16
Toluene		1,2,3,4	mg/L	0.100	0.0851	85	80 - 120	2016-08-16
Ethylbenzene		1,2,3,4	mg/L	0.100	0.0941	94	80 - 120	2016-08-16
Xylene		1,2,3,4	mg/L	0.300	0.284	95	80 - 120	2016-08-16

Standard (CCV-1)

QC Batch: 132159

Date Analyzed: 2016-08-16

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4	mg/L	0.100	0.0896	90	80 - 120	2016-08-16
Toluene		1,2,3,4	mg/L	0.100	0.0846	85	80 - 120	2016-08-16
Ethylbenzene		1,2,3,4	mg/L	0.100	0.0934	93	80 - 120	2016-08-16
Xylene		1,2,3,4	mg/L	0.300	0.282	94	80 - 120	2016-08-16

Standard (CCV-2)

QC Batch: 132159

Date Analyzed: 2016-08-16

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4	mg/L	0.100	0.0882	88	80 - 120	2016-08-16
Toluene		1,2,3,4	mg/L	0.100	0.0834	83	80 - 120	2016-08-16
Ethylbenzene		1,2,3,4	mg/L	0.100	0.0922	92	80 - 120	2016-08-16
Xylene		1,2,3,4	mg/L	0.300	0.279	93	80 - 120	2016-08-16

Standard (CCV-1)

QC Batch: 132208

Date Analyzed: 2016-08-18

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4	mg/L	0.100	0.102	102	80 - 120	2016-08-18
Toluene		1,2,3,4	mg/L	0.100	0.0968	97	80 - 120	2016-08-18
Ethylbenzene		1,2,3,4	mg/L	0.100	0.107	107	80 - 120	2016-08-18
Xylene		1,2,3,4	mg/L	0.300	0.321	107	80 - 120	2016-08-18

Standard (CCV-2)

QC Batch: 132208

Date Analyzed: 2016-08-18

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4	mg/L	0.100	0.0998	100	80 - 120	2016-08-18
Toluene		1,2,3,4	mg/L	0.100	0.0947	95	80 - 120	2016-08-18
Ethylbenzene		1,2,3,4	mg/L	0.100	0.104	104	80 - 120	2016-08-18
Xylene		1,2,3,4	mg/L	0.300	0.312	104	80 - 120	2016-08-18

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 then 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.

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Company Name: Tecnic Phone #:

Company name: T2C Solutions Phone #: 432 520-7720

Address: (Street, City, Zip) Fax #: 432 520-7720

Contact Person: _____
Address: _____
City, State, Zip: _____
Fax #: _____
E-mail: _____

2057 Commerce Dr Mulford TX 79703
01511

Invoice to: W. 31212
(If different from above) Plains

Project #: Project Name: Bob Dinsheim
 Project Location (including state): TNM-LF-2000-7 Sampler Signature:

Project #: 7
Project Location (including state): TX - LF-2000-7

[illegible]

	Relinquished by:	Date:	Time:	Received by	Company:	Date:	Time:	INST.	LAB USE	REMARKS:
	(Signature)			(Signature)						

LAB USE
ONLY

ONLY
Initial Y/N
Headspace Y/N NA

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.

007-968

Carrier # 69146L079H69



Certificate of Analysis Summary 541509

TRC Solutions, Inc, Midland, TX

Project Name: Bob Durham

Project Id: TNM-LF-2000-7

Contact: Curt Stanley

Project Location:

Date Received in Lab: Wed Dec-07-16 08:23 am

Report Date: 14-DEC-16

Project Manager: Alex Montoya

Analysis Requested	Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	541509-019	541509-020	541509-021	541509-022	541509-023	541509-024
	Field Id:	Field Id:	Field Id:	Field Id:	Field Id:	MW 2	MW 32	MW 38	MW 4	MW 56	MW 5
	Matrix:	Matrix:	Matrix:	Matrix:	Matrix:	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER
	Sampled:	Sampled:	Sampled:	Sampled:	Sampled:	Dec-06-16 15:05	Dec-06-16 15:28	Dec-06-16 15:45	Dec-06-16 16:12	Dec-06-16 16:35	Dec-06-16 16:59
	Extracted:	Extracted:	Extracted:	Extracted:	Extracted:	Dec-09-16 15:00	Dec-09-16 15:00	Dec-09-16 15:00	Dec-09-16 15:00	Dec-09-16 15:00	Dec-09-16 15:00
BTEX by EPA 8021B	Analyzed:	Analyzed:	Analyzed:	Analyzed:	Analyzed:	Dec-10-16 13:34	Dec-10-16 11:57	Dec-10-16 12:13	Dec-10-16 12:29	Dec-10-16 11:08	Dec-10-16 12:45
Benzene	Units/RL:	Units/RL:	Units/RL:	Units/RL:	Units/RL:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Toluene						RL	RL	RL	RL	RL	RL
Ethylbenzene						<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m_p-Xylenes						<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
o-Xylene						0.00257 0.00200	0.00279 0.00200	0.00279 0.00200	0.00279 0.00200	0.00279 0.00200	0.00433 0.00200
Total Xylenes						<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total BTEX						0.00279 0.00200	0.00536 0.00200	0.00279 0.00200	0.00279 0.00200	0.00279 0.00200	0.00433 0.00200

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager



Certificate of Analysis Summary 541509

TRC Solutions, Inc, Midland, TX

Project Name: Bob Durham

Project Id: TNM-LF-2000-7

Contact: Curt Stanley

Project Location:

Date Received in Lab: Wed Dec-07-16 08:23 am

Report Date: 14-DEC-16

Project Manager: Alex Montoya



Analysis Requested	Lab Id:	541509-025					
	Field Id:	MW 12					
	Depth:						
	Matrix:	GROUND WATER					
	Sampled:	Dec-06-16 17:27					
BTEx by EPA 8021B	Extracted:	Dec-09-16 15:00					
	Analyzed:	Dec-10-16 13:02					
	Units/RL:	mg/L RL					
	Benzene	<0.00200 0.00200					
	Toluene	<0.00200 0.00200					
Ethylbenzene		<0.00200 0.00200					
	m p-Xylenes	0.00411 0.00200					
	o-Xylene	<0.00200 0.00200					
Total Xylenes		0.00411 0.00200					
Total BTEx		0.00411 0.00200					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager



Certificate of Analysis Summary 541509

TRC Solutions, Inc, Midland, TX

Project Name: Bob Durham

Project Id: TNM-LF-2000-7

Contact: Curt Stanley

Project Location:

Date Received in Lab: Wed Dec-07-16 08:23 am

Report Date: 14-DEC-16

Project Manager: Alex Montoya



Analysis Requested	Lab Id:	541509-025					
	Field Id:	MW 12					
	Depth:						
	Matrix:	GROUND WATER					
	Sampled:	Dec-06-16 17:27					
PAHs by 8270C SIM SUB: TX104704295	Extracted:	Dec-13-16 10:40					
	Analyzed:	Dec-13-16 22:17					
	Units/RL:	mg/L RL					
	Acenaphthene	0.000360 0.000278					
	Acenaphthylene	0.000316 0.000278					
	Anthracene	<0.000278 0.000278					
	Benzo(a)anthracene	<0.000278 0.000278					
	Benzo(a)pyrene	<0.000278 0.000278					
	Benzo(b)fluoranthene	<0.000278 0.000278					
	Benzo(g,h,i)perylene	<0.000278 0.000278					
	Benzo(k)fluoranthene	<0.000278 0.000278					
	Chrysene	0.000304 0.000278					
	Dibenz(a,h)anthracene	<0.000278 0.000278					
	Dibenzofuran	0.00429 0.000278					
	Fluoranthene	<0.000278 0.000278					
Indeno(1,2,3-c,d)Pyrene	Fluorene	0.00461 0.000278					
	Indeno(1,2,3-c,d)Pyrene	<0.000278 0.000278					
	Naphthalene	0.00675 0.000278					
	Phenanthrene	0.00262 0.000278					
	Pyrene	<0.000278 0.000278					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks

Kelsey Brooks
Project Manager

Analytical Report 541509

**for
TRC Solutions, Inc**

Project Manager: Curt Stanley

Bob Durham

TNM-LF-2000-7

14-DEC-16

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



14-DEC-16

Project Manager: **Curt Stanley**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **541509**

Bob Durham

Project Address:

Curt Stanley:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 541509. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 541509 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW 11	W	12-05-16 14:50		541509-001
MW 23	W	12-05-16 15:20		541509-002
MW 25	W	12-05-16 15:37		541509-003
MW 27	W	12-05-16 16:01		541509-004
MW 28	W	12-05-16 16:23		541509-005
MW 30	W	12-05-16 16:37		541509-006
MW 33	W	12-05-16 16:58		541509-007
MW 15	W	12-05-16 17:26		541509-008
MW 3	W	12-06-16 10:42		541509-009
MW 31	W	12-06-16 11:05		541509-010
MW 37	W	12-06-16 11:27		541509-011
MW 6	W	12-06-16 12:05		541509-012
MW 7	W	12-06-16 12:20		541509-013
MW 8	W	12-06-16 12:35		541509-014
MW 10	W	12-06-16 12:52		541509-015
MW 16	W	12-06-16 13:26		541509-016
MW 1	W	12-06-16 14:12		541509-017
MW 13	W	12-06-16 14:32		541509-018
MW 2	W	12-06-16 15:05		541509-019
MW 32	W	12-06-16 15:28		541509-020
MW 38	W	12-06-16 15:45		541509-021
MW 4	W	12-06-16 16:12		541509-022
MW 56	W	12-06-16 16:35		541509-023
MW 5	W	12-06-16 16:59		541509-024
MW 12	W	12-06-16 17:27		541509-025



CASE NARRATIVE



Client Name: TRC Solutions, Inc

Project Name: Bob Durham

Project ID: *TNM-LF-2000-7*
Work Order Number(s): *541509*

Report Date: *14-DEC-16*
Date Received: *12/07/2016*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3005389 BTEX by EPA 8021B

Surrogate 1,4-Difluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 541509-003 SD.

Batch: LBA-3005566 PAHs by 8270C SIM

Surrogate 2-Fluorobiphenyl, Surrogate Nitrobenzene-d5 recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 541509-025.



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 11
Lab Sample Id: 541509-001

Matrix: Ground Water
Date Collected: 12.05.16 14.50

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.09.16 21.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.09.16 21.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.09.16 21.13	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.09.16 21.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.09.16 21.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.09.16 21.13	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.09.16 21.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	80-120	12.09.16 21.13		
4-Bromofluorobenzene	460-00-4	97	%	80-120	12.09.16 21.13		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 23

Matrix: Ground Water

Date Received: 12.07.16 08.23

Lab Sample Id: 541509-002

Date Collected: 12.05.16 15.20

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.09.16 23.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.09.16 23.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.09.16 23.06	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.09.16 23.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.09.16 23.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.09.16 23.06	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.09.16 23.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	80-120	12.09.16 23.06		
4-Bromofluorobenzene	460-00-4	96	%	80-120	12.09.16 23.06		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 25
Lab Sample Id: 541509-003

Matrix: Ground Water
Date Collected: 12.05.16 15.37

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.09.16 21.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.09.16 21.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.09.16 21.30	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.09.16 21.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.09.16 21.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.09.16 21.30	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.09.16 21.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	80-120	12.09.16 21.30		
4-Bromofluorobenzene	460-00-4	95	%	80-120	12.09.16 21.30		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 27

Matrix: Ground Water

Date Received: 12.07.16 08.23

Lab Sample Id: 541509-004

Date Collected: 12.05.16 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.09.16 21.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.09.16 21.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.09.16 21.46	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.09.16 21.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.09.16 21.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.09.16 21.46	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.09.16 21.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	93	%	80-120	12.09.16 21.46		
4-Bromofluorobenzene	460-00-4	93	%	80-120	12.09.16 21.46		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 28
Lab Sample Id: 541509-005

Matrix: Ground Water
Date Collected: 12.05.16 16.23

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.09.16 22.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.09.16 22.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.09.16 22.02	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.09.16 22.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.09.16 22.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.09.16 22.02	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.09.16 22.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	80-120	12.09.16 22.02		
4-Bromofluorobenzene	460-00-4	99	%	80-120	12.09.16 22.02		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 30
Lab Sample Id: 541509-006

Matrix: Ground Water
Date Collected: 12.05.16 16.37

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.09.16 22.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.09.16 22.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.09.16 22.18	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.09.16 22.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.09.16 22.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.09.16 22.18	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.09.16 22.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	80-120	12.09.16 22.18		
4-Bromofluorobenzene	460-00-4	96	%	80-120	12.09.16 22.18		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 33
Lab Sample Id: 541509-007

Matrix: Ground Water
Date Collected: 12.05.16 16.58

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.09.16 22.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.09.16 22.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.09.16 22.35	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.09.16 22.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.09.16 22.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.09.16 22.35	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.09.16 22.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	80-120	12.09.16 22.35		
4-Bromofluorobenzene	460-00-4	98	%	80-120	12.09.16 22.35		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 15
Lab Sample Id: 541509-008

Matrix: Ground Water
Date Collected: 12.05.16 17.26

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.09.16 23.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.09.16 23.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.09.16 23.55	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.09.16 23.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.09.16 23.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.09.16 23.55	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.09.16 23.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	80-120	12.09.16 23.55		
4-Bromofluorobenzene	460-00-4	99	%	80-120	12.09.16 23.55		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 3
Lab Sample Id: 541509-009

Matrix: Ground Water
Date Collected: 12.06.16 10.42

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.09.16 22.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.09.16 22.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.09.16 22.50	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.09.16 22.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.09.16 22.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.09.16 22.50	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.09.16 22.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	80-120	12.09.16 22.50		
4-Bromofluorobenzene	460-00-4	93	%	80-120	12.09.16 22.50		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 31
Lab Sample Id: 541509-010

Matrix: Ground Water
Date Collected: 12.06.16 11.05

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 00.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 00.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 00.11	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 00.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 00.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 00.11	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 00.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	80-120	12.10.16 00.11		
4-Bromofluorobenzene	460-00-4	95	%	80-120	12.10.16 00.11		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 37
Lab Sample Id: 541509-011

Matrix: Ground Water
Date Collected: 12.06.16 11.27

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 00.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 00.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 00.28	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 00.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 00.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 00.28	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 00.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	80-120	12.10.16 00.28		
4-Bromofluorobenzene	460-00-4	101	%	80-120	12.10.16 00.28		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 6

Matrix: Ground Water

Date Received: 12.07.16 08.23

Lab Sample Id: 541509-012

Date Collected: 12.06.16 12.05

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 00.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 00.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 00.44	U	1
m_p-Xylenes	179601-23-1	0.00366	0.00200	mg/L	12.10.16 00.44		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 00.44	U	1
Total Xylenes	1330-20-7	0.00366	0.00200	mg/L	12.10.16 00.44		1
Total BTEX		0.00366	0.00200	mg/L	12.10.16 00.44		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	93	%	80-120	12.10.16 00.44		
4-Bromofluorobenzene	460-00-4	101	%	80-120	12.10.16 00.44		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 7
Lab Sample Id: 541509-013

Matrix: Ground Water
Date Collected: 12.06.16 12.20

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 02.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 02.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 02.21	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 02.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 02.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 02.21	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 02.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	80-120	12.10.16 02.21		
4-Bromofluorobenzene	460-00-4	91	%	80-120	12.10.16 02.21		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 8

Matrix: Ground Water

Date Received: 12.07.16 08.23

Lab Sample Id: 541509-014

Date Collected: 12.06.16 12.35

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 02.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 02.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 02.05	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 02.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 02.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 02.05	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 02.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	80-120	12.10.16 02.05		
4-Bromofluorobenzene	460-00-4	93	%	80-120	12.10.16 02.05		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 10
Lab Sample Id: 541509-015

Matrix: Ground Water
Date Collected: 12.06.16 12.52

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 01.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 01.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 01.00	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 01.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 01.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 01.00	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 01.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	90	%	80-120	12.10.16 01.00		
4-Bromofluorobenzene	460-00-4	93	%	80-120	12.10.16 01.00		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 16
Lab Sample Id: 541509-016

Matrix: Ground Water
Date Collected: 12.06.16 13.26

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 01.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 01.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 01.33	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 01.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 01.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 01.33	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 01.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	80-120	12.10.16 01.33		
4-Bromofluorobenzene	460-00-4	103	%	80-120	12.10.16 01.33		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 1

Matrix: Ground Water

Date Received: 12.07.16 08.23

Lab Sample Id: 541509-017

Date Collected: 12.06.16 14.12

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 01.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 01.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 01.16	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 01.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 01.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 01.16	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 01.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	80-120	12.10.16 01.16		
4-Bromofluorobenzene	460-00-4	96	%	80-120	12.10.16 01.16		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 13
Lab Sample Id: 541509-018

Matrix: Ground Water
Date Collected: 12.06.16 14.32

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 13.00

Seq Number: 3005389

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 01.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 01.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 01.49	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 01.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 01.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 01.49	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 01.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	80-120	12.10.16 01.49		
4-Bromofluorobenzene	460-00-4	102	%	80-120	12.10.16 01.49		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 2
Lab Sample Id: 541509-019

Matrix: Ground Water
Date Collected: 12.06.16 15.05

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 15.00

Seq Number: 3005409

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 13.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 13.34	U	1
Ethylbenzene	100-41-4	0.00257	0.00200	mg/L	12.10.16 13.34		1
m_p-Xylenes	179601-23-1	0.00279	0.00200	mg/L	12.10.16 13.34		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 13.34	U	1
Total Xylenes	1330-20-7	0.00279	0.00200	mg/L	12.10.16 13.34		1
Total BTEX		0.00536	0.00200	mg/L	12.10.16 13.34		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	80-120	12.10.16 13.34		
4-Bromofluorobenzene	460-00-4	99	%	80-120	12.10.16 13.34		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 32
Lab Sample Id: 541509-020

Matrix: Ground Water
Date Collected: 12.06.16 15.28

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 15.00

Seq Number: 3005409

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 11.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 11.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 11.57	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 11.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 11.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 11.57	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 11.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	80-120	12.10.16 11.57		
4-Bromofluorobenzene	460-00-4	96	%	80-120	12.10.16 11.57		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 38
Lab Sample Id: 541509-021

Matrix: Ground Water
Date Collected: 12.06.16 15.45

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 15.00

Seq Number: 3005409

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 12.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 12.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 12.13	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 12.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 12.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 12.13	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 12.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	80-120	12.10.16 12.13		
4-Bromofluorobenzene	460-00-4	97	%	80-120	12.10.16 12.13		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 4
Lab Sample Id: 541509-022

Matrix: Ground Water
Date Collected: 12.06.16 16.12

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 15.00

Seq Number: 3005409

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 12.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 12.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 12.29	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 12.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 12.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 12.29	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 12.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	97	%	80-120	12.10.16 12.29		
4-Bromofluorobenzene	460-00-4	94	%	80-120	12.10.16 12.29		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 56
Lab Sample Id: 541509-023

Matrix: Ground Water
Date Collected: 12.06.16 16.35

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 15.00

Seq Number: 3005409

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 11.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 11.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 11.08	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	12.10.16 11.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 11.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	12.10.16 11.08	U	1
Total BTEX		<0.00200	0.00200	mg/L	12.10.16 11.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	80-120	12.10.16 11.08		
4-Bromofluorobenzene	460-00-4	91	%	80-120	12.10.16 11.08		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 5
Lab Sample Id: 541509-024

Matrix: Ground Water
Date Collected: 12.06.16 16.59

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 15.00

Seq Number: 3005409

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 12.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 12.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 12.45	U	1
m_p-Xylenes	179601-23-1	0.00433	0.00200	mg/L	12.10.16 12.45		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 12.45	U	1
Total Xylenes	1330-20-7	0.00433	0.00200	mg/L	12.10.16 12.45		1
Total BTEX		0.00433	0.00200	mg/L	12.10.16 12.45		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	80-120	12.10.16 12.45		
4-Bromofluorobenzene	460-00-4	118	%	80-120	12.10.16 12.45		



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 12
Lab Sample Id: 541509-025

Matrix: Ground Water
Date Collected: 12.06.16 17.27

Date Received: 12.07.16 08.23

Analytical Method: PAHs by 8270C SIM

Prep Method: SW3510C

Tech: HAC

% Moisture:

Analyst: SOZ

Date Prep: 12.13.16 10.40

Seq Number: 3005566

SUB: TX104704295

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Acenaphthene	83-32-9	0.000360	0.000278	mg/L	12.13.16 22.17		1
Acenaphthylene	208-96-8	0.000316	0.000278	mg/L	12.13.16 22.17		1
Anthracene	120-12-7	<0.000278	0.000278	mg/L	12.13.16 22.17		1
Benzo(a)anthracene	56-55-3	<0.000278	0.000278	mg/L	12.13.16 22.17		1
Benzo(a)pyrene	50-32-8	<0.000278	0.000278	mg/L	12.13.16 22.17		1
Benzo(b)fluoranthene	205-99-2	<0.000278	0.000278	mg/L	12.13.16 22.17		1
Benzo(g,h,i)perylene	191-24-2	<0.000278	0.000278	mg/L	12.13.16 22.17		1
Benzo(k)fluoranthene	207-08-9	<0.000278	0.000278	mg/L	12.13.16 22.17		1
Chrysene	218-01-9	0.000304	0.000278	mg/L	12.13.16 22.17		1
Dibenz(a,h)anthracene	53-70-3	<0.000278	0.000278	mg/L	12.13.16 22.17		1
Dibenzofuran	132-64-9	0.00429	0.000278	mg/L	12.13.16 22.17		1
Fluoranthene	206-44-0	<0.000278	0.000278	mg/L	12.13.16 22.17		1
Fluorene	86-73-7	0.00461	0.000278	mg/L	12.13.16 22.17		1
Indeno(1,2,3-c,d)Pyrene	193-39-5	<0.000278	0.000278	mg/L	12.13.16 22.17		1
Naphthalene	91-20-3	0.00675	0.000278	mg/L	12.13.16 22.17		1
Phenanthrene	85-01-8	0.00262	0.000278	mg/L	12.13.16 22.17		1
Pyrene	129-00-0	<0.000278	0.000278	mg/L	12.13.16 22.17		1

Surrogate

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Nitrobenzene-d5	4165-60-0	149	%	52-128	12.13.16 22.17	**
2-Fluorobiphenyl	321-60-8	140	%	55-135	12.13.16 22.17	**
Terphenyl-D14	1718-51-0	98	%	54-131	12.13.16 22.17	



Certificate of Analytical Results 541509



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: MW 12
Lab Sample Id: 541509-025

Matrix: Ground Water
Date Collected: 12.06.16 17.27

Date Received: 12.07.16 08.23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 12.09.16 15.00

Seq Number: 3005409

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.10.16 13.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.10.16 13.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.10.16 13.02	U	1
m_p-Xylenes	179601-23-1	0.00411	0.00200	mg/L	12.10.16 13.02		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.10.16 13.02	U	1
Total Xylenes	1330-20-7	0.00411	0.00200	mg/L	12.10.16 13.02		1
Total BTEX		0.00411	0.00200	mg/L	12.10.16 13.02		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	88	%	80-120	12.10.16 13.02		
4-Bromofluorobenzene	460-00-4	100	%	80-120	12.10.16 13.02		

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- **** Surrogate recovered outside laboratory control limit.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- MDL** Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection
- PQL** Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation
- DL** Method Detection Limit
- NC** Non-Calculable
- +** NELAC certification not offered for this compound.
- *** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	

TRC Solutions, Inc
Bob Durham

Analytical Method: PAHs by 8270C SIM

Seq Number: 3005566

MB Sample Id: 717160-1-BLK

Matrix: Water

LCS Sample Id: 717160-1-BKS

Prep Method: SW3510C

Date Prep: 12.13.16

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acenaphthene	<0.000283	0.00283	0.00281	99	47-120	mg/L	12.13.16 20:18	
Acenaphthylene	<0.000283	0.00283	0.00284	100	60-117	mg/L	12.13.16 20:18	
Anthracene	<0.000283	0.00283	0.00272	96	60-117	mg/L	12.13.16 20:18	
Benzo(a)anthracene	<0.000283	0.00283	0.00277	98	56-120	mg/L	12.13.16 20:18	
Benzo(a)pyrene	<0.000283	0.00283	0.00278	98	65-120	mg/L	12.13.16 20:18	
Benzo(b)fluoranthene	<0.000283	0.00283	0.00285	101	45-124	mg/L	12.13.16 20:18	
Benzo(g,h,i)perylene	<0.000283	0.00283	0.00261	92	38-123	mg/L	12.13.16 20:18	
Benzo(k)fluoranthene	<0.000283	0.00283	0.00266	94	45-124	mg/L	12.13.16 20:18	
Chrysene	<0.000283	0.00283	0.00278	98	55-120	mg/L	12.13.16 20:18	
Dibenz(a,h)anthracene	<0.000283	0.00283	0.00276	98	42-127	mg/L	12.13.16 20:18	
Dibenzofuran	<0.000283	0.00283	0.00238	84	54-120	mg/L	12.13.16 20:18	
Fluoranthene	<0.000283	0.00283	0.00264	93	54-120	mg/L	12.13.16 20:18	
Fluorene	<0.000283	0.00283	0.00286	101	50-120	mg/L	12.13.16 20:18	
Indeno(1,2,3-c,d)Pyrene	<0.000283	0.00283	0.00263	93	43-125	mg/L	12.13.16 20:18	
Naphthalene	<0.000283	0.00283	0.00275	97	39-120	mg/L	12.13.16 20:18	
Phenanthrene	<0.000283	0.00283	0.00277	98	51-120	mg/L	12.13.16 20:18	
Pyrene	<0.000283	0.00283	0.00302	107	49-128	mg/L	12.13.16 20:18	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	Limits	Units	Analysis Date	
Nitrobenzene-d5	65		112		52-128	%	12.13.16 20:18	
2-Fluorobiphenyl	89		93		55-135	%	12.13.16 20:18	
Terphenyl-D14	81		98		54-131	%	12.13.16 20:18	

TRC Solutions, Inc
Bob Durham

Analytical Method: PAHs by 8270C SIM

Seq Number: 3005566

Parent Sample Id: 541941-001

Matrix: Water

MS Sample Id: 541941-001 S

Prep Method: SW3511

Date Prep: 12.13.16

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Acenaphthene	<0.000277	0.00277	0.00299	108	47-120	mg/L	12.13.16 20:48	
Acenaphthylene	<0.000277	0.00277	0.00301	109	60-117	mg/L	12.13.16 20:48	
Anthracene	<0.000277	0.00277	0.00293	106	60-117	mg/L	12.13.16 20:48	
Benzo(a)anthracene	<0.000277	0.00277	0.00294	106	56-120	mg/L	12.13.16 20:48	
Benzo(a)pyrene	<0.000277	0.00277	0.00292	105	65-120	mg/L	12.13.16 20:48	
Benzo(b)fluoranthene	<0.000277	0.00277	0.00302	109	45-124	mg/L	12.13.16 20:48	
Benzo(g,h,i)perylene	<0.000277	0.00277	0.00284	103	38-123	mg/L	12.13.16 20:48	
Benzo(k)fluoranthene	<0.000277	0.00277	0.00279	101	45-124	mg/L	12.13.16 20:48	
Chrysene	<0.000277	0.00277	0.00294	106	55-120	mg/L	12.13.16 20:48	
Dibenz(a,h)anthracene	<0.000277	0.00277	0.00309	112	42-127	mg/L	12.13.16 20:48	
Dibenzofuran	<0.000277	0.00277	0.00251	91	54-120	mg/L	12.13.16 20:48	
Fluoranthene	<0.000277	0.00277	0.00294	106	54-120	mg/L	12.13.16 20:48	
Fluorene	<0.000277	0.00277	0.00300	108	50-120	mg/L	12.13.16 20:48	
Indeno(1,2,3-c,d)Pyrene	<0.000277	0.00277	0.00293	106	43-125	mg/L	12.13.16 20:48	
Naphthalene	<0.000277	0.00277	0.00292	105	39-120	mg/L	12.13.16 20:48	
Phenanthrene	<0.000277	0.00277	0.00289	104	51-120	mg/L	12.13.16 20:48	
Pyrene	<0.000277	0.00277	0.00312	113	49-128	mg/L	12.13.16 20:48	

Surrogate

	MS %Rec	MS Flag	Limits	Units	Analysis Date
Nitrobenzene-d5	117		52-128	%	12.13.16 20:48
2-Fluorobiphenyl	92		55-135	%	12.13.16 20:48
Terphenyl-D14	95		54-131	%	12.13.16 20:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3005389

MB Sample Id: 717078-1-BLK

Matrix: Water

LCS Sample Id: 717078-1-BKS

Prep Method: SW5030B

Date Prep: 12.09.16

LCSD Sample Id: 717078-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0828	83	0.0896	90	70-125	8	25	mg/L	12.09.16 19:04	
Toluene	<0.00200	0.100	0.0783	78	0.0853	85	70-125	9	25	mg/L	12.09.16 19:04	
Ethylbenzene	<0.00200	0.100	0.0833	83	0.0908	91	71-129	9	25	mg/L	12.09.16 19:04	
m_p-Xylenes	<0.00200	0.200	0.166	83	0.183	92	70-131	10	25	mg/L	12.09.16 19:04	
o-Xylene	<0.00200	0.100	0.0821	82	0.0911	91	71-133	10	25	mg/L	12.09.16 19:04	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		101		80-120	%	12.09.16 19:04
4-Bromofluorobenzene	94		95		100		80-120	%	12.09.16 19:04

TRC Solutions, Inc
Bob Durham

Analytical Method: BTEX by EPA 8021B

Seq Number: 3005409

MB Sample Id: 717079-1-BLK

Matrix: Water

LCS Sample Id: 717079-1-BKS

Prep Method: SW5030B

Date Prep: 12.09.16

LCSD Sample Id: 717079-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0891	89	0.100	100	70-125	12	25	mg/L	12.10.16 09:28	
Toluene	<0.00200	0.100	0.0844	84	0.0951	95	70-125	12	25	mg/L	12.10.16 09:28	
Ethylbenzene	<0.00200	0.100	0.0894	89	0.102	102	71-129	13	25	mg/L	12.10.16 09:28	
m_p-Xylenes	<0.00200	0.200	0.178	89	0.205	103	70-131	14	25	mg/L	12.10.16 09:28	
o-Xylene	<0.00200	0.100	0.0875	88	0.105	105	71-133	18	25	mg/L	12.10.16 09:28	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1,4-Difluorobenzene	102		106		99		80-120	%	12.10.16 09:28			
4-Bromofluorobenzene	101		108		109		80-120	%	12.10.16 09:28			

Analytical Method: BTEX by EPA 8021B

Seq Number: 3005389

Parent Sample Id: 541509-003

Matrix: Ground Water

MS Sample Id: 541509-003 S

Prep Method: SW5030B

Date Prep: 12.09.16

MSD Sample Id: 541509-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0945	95	0.0892	89	70-125	6	25	mg/L	12.09.16 19:37	
Toluene	<0.00200	0.100	0.0898	90	0.0852	85	70-125	5	25	mg/L	12.09.16 19:37	
Ethylbenzene	<0.00200	0.100	0.0957	96	0.0959	96	71-129	0	25	mg/L	12.09.16 19:37	
m_p-Xylenes	<0.00200	0.200	0.192	96	0.194	97	70-131	1	25	mg/L	12.09.16 19:37	
o-Xylene	<0.00200	0.100	0.0933	93	0.0961	96	71-133	3	25	mg/L	12.09.16 19:37	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1,4-Difluorobenzene			104		757	**	80-120	%	12.09.16 19:37			
4-Bromofluorobenzene			100		114		80-120	%	12.09.16 19:37			

Analytical Method: BTEX by EPA 8021B

Seq Number: 3005409

Parent Sample Id: 541509-023

Matrix: Ground Water

MS Sample Id: 541509-023 S

Prep Method: SW5030B

Date Prep: 12.09.16

MSD Sample Id: 541509-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0925	93	0.0820	82	70-125	12	25	mg/L	12.10.16 10:00	
Toluene	<0.00200	0.100	0.0872	87	0.0781	78	70-125	11	25	mg/L	12.10.16 10:00	
Ethylbenzene	<0.00200	0.100	0.0924	92	0.0831	83	71-129	11	25	mg/L	12.10.16 10:00	
m_p-Xylenes	<0.00200	0.200	0.185	93	0.165	83	70-131	11	25	mg/L	12.10.16 10:00	
o-Xylene	<0.00200	0.100	0.0909	91	0.0836	84	71-133	8	25	mg/L	12.10.16 10:00	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1,4-Difluorobenzene			99		99		80-120	%	12.10.16 10:00			
4-Bromofluorobenzene			96		110		80-120	%	12.10.16 10:00			



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc

Date/ Time Received: 12/07/2016 08:23:00 AM

Work Order #: 541509

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3,5
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	Yes Dallas
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#22 <2 for all samples preserved with HNO ₃ , HCL, H ₂ SO ₄ ? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	Yes
#23 >10 for all samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by:

Jessica Kramer

Jessica Kramer

Date: 12/07/2016

Checklist reviewed by:

Alex Montoya

Alex Montoya

Date: 12/09/2016



Certificate of Analysis Summary 541509

TRC Solutions, Inc, Midland, TX

Project Name: Bob Durham

Project Id: TNM-LF-2000-7

Contact: Curt Stanley

Project Location:

Date Received in Lab: Wed Dec-07-16 08:23 am

Report Date: 14-DEC-16

Project Manager: Alex Montoya



Analysis Requested	Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	541509-001	541509-002	541509-003	541509-004	541509-005	541509-006
	Extracted:	Analyzed:	Units/RL:								
	BTEX by EPA 8021B										
	Benzene										
	Toluene										
	Ethylbenzene										
	m_p-Xylenes										
	o-Xylene										
	Total Xylenes										
	Total BTEX										

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end user of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks

Kelsey Brooks
Project Manager



Certificate of Analysis Summary 541509
TRC Solutions, Inc, Midland, TX
Project Name: Bob Durham



Project Id: TNM-LF-2000-7
Contact: Curt Stanley
Project Location:
Date Received in Lab: Wed Dec-07-16 08:23 am
Report Date: 14-DEC-16
Project Manager: Alex Montoya

Analysis Requested	Lab Id:	541509-007	541509-008	541509-009	541509-010	541509-011	541509-012
	Field Id:	MW 33	MW 15	MW 3	MW 31	MW 37	MW 6
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER
	Sampled:	Dec-05-16 16:58	Dec-05-16 17:26	Dec-06-16 10:42	Dec-06-16 11:05	Dec-06-16 11:27	Dec-06-16 12:05
BTEX by EPA 8021B	Extracted:	Dec-09-16 13:00	Dec-09-16 13:00	Dec-09-16 13:00	Dec-09-16 13:00	Dec-09-16 13:00	Dec-09-16 13:00
	Analyzed:	Dec-09-16 22:35	Dec-09-16 23:55	Dec-09-16 22:50	Dec-10-16 00:11	Dec-10-16 00:28	Dec-10-16 00:44
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
	Benzene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
	Toluene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.00366 0.00200
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.00366 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.00366 0.00200

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 541509

TRC Solutions, Inc, Midland, TX



Project Id: TNM-LF-2000-7

Contact: Curt Stanley

Project Location:

Project Name: Bob Durham

Date Received in Lab: Wed Dec-07-16 08:23 am

Report Date: 14-DEC-16

Project Manager: Alex Montoya

Analysis Requested	Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	541509-013	541509-014	541509-015	541509-016	541509-017	541509-018
	Field Id:	Field Id:	Depth:	Matrix:	Sampled:	MW 7	MW 8	MW 10	MW 16	MW 1	MW 13
	Matrix:	Matrix:	Depth:	Matrix:	Sampled:	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER
	Sampled:	Sampled:	Depth:	Matrix:	Sampled:	Dec-06-16 12:20	Dec-06-16 12:35	Dec-06-16 12:52	Dec-06-16 13:26	Dec-06-16 14:12	Dec-06-16 14:32
	Extracted:	Extracted:	Depth:	Matrix:	Sampled:	Dec-09-16 13:00	Dec-09-16 13:00	Dec-09-16 13:00	Dec-09-16 13:00	Dec-09-16 13:00	Dec-09-16 13:00
BTEX by EPA 8021B						Dec-10-16 02:21	Dec-10-16 02:05	Dec-10-16 01:00	Dec-10-16 01:33	Dec-10-16 01:16	Dec-10-16 01:49
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
						RL	RL	RL	RL	RL	RL
						Units/RL:	Units/RL:	Units/RL:	Units/RL:	Units/RL:	Units/RL:
Benzene						<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Toluene						0.00200	0.00200	0.00200	0.00200	0.00200	0.00200
Ethylbenzene						0.00200	0.00200	0.00200	0.00200	0.00200	0.00200
m_p-Xylenes						0.00200	0.00200	0.00200	0.00200	0.00200	0.00200
o-Xylene						0.00200	0.00200	0.00200	0.00200	0.00200	0.00200
Total Xylenes						<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Total BTEX						<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200

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Kelsey Brooks

Kelsey Brooks
Project Manager



Certificate of Analysis Summary 547322

TRC Solutions, Inc, Midland, TX

Project Name: Bob Durham



Project Id:

Contact: Curt Stanley

Project Location: Monument, NM

Date Received in Lab: Fri Feb-24-17 10:00 am

Report Date: 02-MAR-17

Project Manager: Liz Givens

Analysis Requested	Lab Id:	547322-001	547322-002	547322-003	547322-004	547322-005	547322-006
	Field Id:	MW 1	MW 12	MW 13	MW 2	MW 32	MW 38
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER
	Sampled:	Feb-22-17 14:35	Feb-22-17 15:10	Feb-22-17 15:30	Feb-22-17 16:15	Feb-23-17 11:50	Feb-23-17 12:20
BTEX by EPA 8021B	Extracted:	Feb-27-17 15:30	Feb-27-17 15:30	Feb-27-17 15:30	Feb-28-17 12:00	Feb-27-17 15:30	Feb-27-17 15:30
	Analyzed:	Feb-27-17 21:09	Feb-28-17 00:09	Feb-27-17 20:53	Feb-28-17 23:03	Feb-27-17 23:36	Feb-27-17 23:53
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Benzene		<0.00200 0.00200	0.00228 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m_p-Xylenes		<0.00200 0.00200	0.00584 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
o-Xylene		<0.00200 0.00200	0.00490 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	0.0107 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	0.0130 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200

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Brandi Ritcherson
Odessa Laboratory Director



Certificate of Analysis Summary 547322

TRC Solutions, Inc, Midland, TX

Project Name: Bob Durham



Project Id:

Contact: Curt Stanley

Project Location: Monument,NM

Date Received in Lab: Fri Feb-24-17 10:00 am

Report Date: 02-MAR-17

Project Manager: Liz Givens

<i>Analysis Requested</i>	<i>Lab Id:</i>	547322-007	547322-008	547322-009			
	<i>Field Id:</i>	MW 4	MW 5	MW 56			
	<i>Depth:</i>						
	<i>Matrix:</i>	GROUND WATER	GROUND WATER	GROUND WATER			
	<i>Sampled:</i>	Feb-23-17 12:55	Feb-23-17 13:20	Feb-23-17 13:45			
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-27-17 15:30	Feb-27-17 15:30	Feb-27-17 15:30			
	<i>Analyzed:</i>	Feb-27-17 23:04	Feb-27-17 23:21	Feb-27-17 22:48			
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL			
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200			
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200			
Ethylbenzene		<0.00200 0.00200	0.00215 0.00200	<0.00200 0.00200			
m_p-Xylenes		<0.00200 0.00200	0.00755 0.00200	<0.00200 0.00200			
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200			
Total Xylenes		<0.00200 0.00200	0.00755 0.00200	<0.00200 0.00200			
Total BTEX		<0.00200 0.00200	0.00970 0.00200	<0.00200 0.00200			

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Brandi Ritcherson
Odessa Laboratory Director

Analytical Report 547322

**for
TRC Solutions, Inc**

Project Manager: Curt Stanley

Bob Durham

02-MAR-17

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



02-MAR-17

Project Manager: **Curt Stanley**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **547322**
Bob Durham
Project Address: Monument,NM

Curt Stanley:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 547322. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 547322 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brandi Ritcherson

Odessa Laboratory Director

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Sample Cross Reference 547322



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW 1	W	02-22-17 14:35		547322-001
MW 12	W	02-22-17 15:10		547322-002
MW 13	W	02-22-17 15:30		547322-003
MW 2	W	02-22-17 16:15		547322-004
MW 32	W	02-23-17 11:50		547322-005
MW 38	W	02-23-17 12:20		547322-006
MW 4	W	02-23-17 12:55		547322-007
MW 5	W	02-23-17 13:20		547322-008
MW 56	W	02-23-17 13:45		547322-009



CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: Bob Durham

Project ID:

Work Order Number(s): 547322

Report Date: 02-MAR-17

Date Received: 02/24/2017

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 547322



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: **MW 1**
Lab Sample Id: 547322-001

Matrix: Ground Water
Date Collected: 02.22.17 14.35

Date Received: 02.24.17 10.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.27.17 15.30

Seq Number: 3011171

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	02.27.17 21.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	02.27.17 21.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	02.27.17 21.09	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	02.27.17 21.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	02.27.17 21.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	02.27.17 21.09	U	1
Total BTEX		<0.00200	0.00200	mg/L	02.27.17 21.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	86	%	80-120	02.27.17 21.09		
4-Bromofluorobenzene	460-00-4	94	%	80-120	02.27.17 21.09		



Certificate of Analytical Results 547322



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: **MW 12**
Lab Sample Id: 547322-002

Matrix: Ground Water
Date Collected: 02.22.17 15.10

Date Received: 02.24.17 10.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.27.17 15.30

Seq Number: 3011171

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00228	0.00200	mg/L	02.28.17 00.09		1
Toluene	108-88-3	<0.00200	0.00200	mg/L	02.28.17 00.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	02.28.17 00.09	U	1
m_p-Xylenes	179601-23-1	0.00584	0.00200	mg/L	02.28.17 00.09		1
o-Xylene	95-47-6	0.00490	0.00200	mg/L	02.28.17 00.09		1
Total Xylenes	1330-20-7	0.0107	0.00200	mg/L	02.28.17 00.09		1
Total BTEX		0.0130	0.00200	mg/L	02.28.17 00.09		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	80-120	02.28.17 00.09		
4-Bromofluorobenzene	460-00-4	92	%	80-120	02.28.17 00.09		



Certificate of Analytical Results 547322



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: **MW 13**
Lab Sample Id: 547322-003

Matrix: Ground Water
Date Collected: 02.22.17 15.30

Date Received: 02.24.17 10.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.27.17 15.30

Seq Number: 3011171

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	02.27.17 20.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	02.27.17 20.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	02.27.17 20.53	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	02.27.17 20.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	02.27.17 20.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	02.27.17 20.53	U	1
Total BTEX		<0.00200	0.00200	mg/L	02.27.17 20.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	85	%	80-120	02.27.17 20.53		
4-Bromofluorobenzene	460-00-4	85	%	80-120	02.27.17 20.53		



Certificate of Analytical Results 547322



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: **MW 2**
Lab Sample Id: 547322-004

Matrix: Ground Water
Date Collected: 02.22.17 16.15

Date Received: 02.24.17 10.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.28.17 12.00

Seq Number: 3011231

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	02.28.17 23.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	02.28.17 23.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	02.28.17 23.03	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	02.28.17 23.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	02.28.17 23.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	02.28.17 23.03	U	1
Total BTEX		<0.00200	0.00200	mg/L	02.28.17 23.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	80-120	02.28.17 23.03		
4-Bromofluorobenzene	460-00-4	90	%	80-120	02.28.17 23.03		



Certificate of Analytical Results 547322



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: **MW 32**
Lab Sample Id: 547322-005

Matrix: Ground Water
Date Collected: 02.23.17 11.50

Date Received: 02.24.17 10.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.27.17 15.30

Seq Number: 3011171

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	02.27.17 23.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	02.27.17 23.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	02.27.17 23.36	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	02.27.17 23.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	02.27.17 23.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	02.27.17 23.36	U	1
Total BTEX		<0.00200	0.00200	mg/L	02.27.17 23.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	93	%	80-120	02.27.17 23.36		
4-Bromofluorobenzene	460-00-4	91	%	80-120	02.27.17 23.36		



Certificate of Analytical Results 547322



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: **MW 38**
Lab Sample Id: 547322-006

Matrix: Ground Water
Date Collected: 02.23.17 12.20

Date Received: 02.24.17 10.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.27.17 15.30

Seq Number: 3011171

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	02.27.17 23.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	02.27.17 23.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	02.27.17 23.53	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	02.27.17 23.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	02.27.17 23.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	02.27.17 23.53	U	1
Total BTEX		<0.00200	0.00200	mg/L	02.27.17 23.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	80-120	02.27.17 23.53		
4-Bromofluorobenzene	460-00-4	92	%	80-120	02.27.17 23.53		



Certificate of Analytical Results 547322



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: **MW 4**
Lab Sample Id: 547322-007

Matrix: Ground Water
Date Collected: 02.23.17 12:55

Date Received: 02.24.17 10:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.27.17 15:30

Seq Number: 3011171

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	02.27.17 23.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	02.27.17 23.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	02.27.17 23.04	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	02.27.17 23.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	02.27.17 23.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	02.27.17 23.04	U	1
Total BTEX		<0.00200	0.00200	mg/L	02.27.17 23.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	80-120	02.27.17 23.04		
4-Bromofluorobenzene	460-00-4	84	%	80-120	02.27.17 23.04		



Certificate of Analytical Results 547322



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: **MW 5**
Lab Sample Id: 547322-008

Matrix: Ground Water
Date Collected: 02.23.17 13.20

Date Received: 02.24.17 10.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.27.17 15.30

Seq Number: 3011171

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	02.27.17 23.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	02.27.17 23.21	U	1
Ethylbenzene	100-41-4	0.00215	0.00200	mg/L	02.27.17 23.21		1
m_p-Xylenes	179601-23-1	0.00755	0.00200	mg/L	02.27.17 23.21		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	02.27.17 23.21	U	1
Total Xylenes	1330-20-7	0.00755	0.00200	mg/L	02.27.17 23.21		1
Total BTEX		0.00970	0.00200	mg/L	02.27.17 23.21		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106		%	80-120	02.27.17 23.21	
4-Bromofluorobenzene	460-00-4	115		%	80-120	02.27.17 23.21	



Certificate of Analytical Results 547322



TRC Solutions, Inc, Midland, TX

Bob Durham

Sample Id: **MW 56**
Lab Sample Id: 547322-009

Matrix: Ground Water
Date Collected: 02.23.17 13.45

Date Received: 02.24.17 10.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 02.27.17 15.30

Seq Number: 3011171

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	02.27.17 22.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	02.27.17 22.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	02.27.17 22.48	U	1
m_p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	02.27.17 22.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	02.27.17 22.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	02.27.17 22.48	U	1
Total BTEX		<0.00200	0.00200	mg/L	02.27.17 22.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	80-120	02.27.17 22.48		
4-Bromofluorobenzene	460-00-4	99	%	80-120	02.27.17 22.48		

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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(602) 437-0330	

TRC Solutions, Inc
Bob Durham

Analytical Method: BTEX by EPA 8021B

Seq Number: 3011171

MB Sample Id: 720749-1-BLK

Matrix: Water

LCS Sample Id: 720749-1-BKS

Prep Method: SW5030B

Date Prep: 02.27.17

LCSD Sample Id: 720749-1-BSD

Parameter	MB	Spike	LCS	LCS	LCSD	LCSD	Limits	%RPD	RPD	Units	Analysis	Flag
	Result	Amount	Result	%Rec	Result	%Rec			Limit	Date		
Benzene	<0.00200	0.100	0.0858	86	0.0872	87	70-125	2	25	mg/L	02.27.17 17:05	
Toluene	<0.00200	0.100	0.0935	94	0.0969	97	70-125	4	25	mg/L	02.27.17 17:05	
Ethylbenzene	<0.00200	0.100	0.0931	93	0.0942	94	71-129	1	25	mg/L	02.27.17 17:05	
m_p-Xylenes	<0.00200	0.200	0.184	92	0.185	93	70-131	1	25	mg/L	02.27.17 17:05	
o-Xylene	<0.00200	0.100	0.0915	92	0.0934	93	71-133	2	25	mg/L	02.27.17 17:05	
Surrogate	MB	MB	LCS	LCS	LCSD	LCSD	Limits	Units	Analysis			
	%Rec	Flag	%Rec	Flag	%Rec	Flag			Date			
1,4-Difluorobenzene	103		106		104		80-120	%	02.27.17 17:05			
4-Bromofluorobenzene	97		94		88		80-120	%	02.27.17 17:05			

Analytical Method: BTEX by EPA 8021B

Seq Number: 3011231

MB Sample Id: 720771-1-BLK

Matrix: Water

LCS Sample Id: 720771-1-BKS

Prep Method: SW5030B

Date Prep: 02.28.17

LCSD Sample Id: 720771-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0866	87	0.0867	87	70-125	0	25	mg/L	02.28.17 12:56	
Toluene	<0.00200	0.100	0.0955	96	0.0942	94	70-125	1	25	mg/L	02.28.17 12:56	
Ethylbenzene	<0.00200	0.100	0.0937	94	0.0928	93	71-129	1	25	mg/L	02.28.17 12:56	
m_p-Xylenes	<0.00200	0.200	0.185	93	0.183	92	70-131	1	25	mg/L	02.28.17 12:56	
o-Xylene	<0.00200	0.100	0.0940	94	0.0950	95	71-133	1	25	mg/L	02.28.17 12:56	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene	104		103		97		80-120			%	02.28.17 12:56	
4-Bromofluorobenzene	100		96		106		80-120			%	02.28.17 12:56	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3011171

Parent Sample Id: 547250-002

Matrix: Water

MS Sample Id: 547250-002 S

Prep Method: SW5030B

Date Prep: 02.27.17

MSD Sample Id: 547250-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.102	102	0.0907	91	70-125	12	25	mg/L	02.27.17 17:38	
Toluene	<0.00200	0.100	0.111	111	0.0972	97	70-125	13	25	mg/L	02.27.17 17:38	
Ethylbenzene	<0.00200	0.100	0.111	111	0.0980	98	71-129	12	25	mg/L	02.27.17 17:38	
m_p-Xylenes	<0.00200	0.200	0.217	109	0.191	96	70-131	13	25	mg/L	02.27.17 17:38	
o-Xylene	<0.00200	0.100	0.114	114	0.0979	98	71-133	15	25	mg/L	02.27.17 17:38	
Surrogate			MS %Rec	MS Flag		MSD %Rec	MSD Flag	Limits		Units	Analysis Date	
1,4-Difluorobenzene			114			108		80-120		%	02.27.17 17:38	
4-Bromofluorobenzene			120			112		80-120		%	02.27.17 17:38	

TRC Solutions, Inc
Bob Durham

Analytical Method: BTEX by EPA 8021B

Seq Number: 3011231

Parent Sample Id: 547427-001

Matrix: Waste Water

MS Sample Id: 547427-001 S

Prep Method: SW5030B

Date Prep: 02.28.17

MSD Sample Id: 547427-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0850	85	0.0926	93	70-125	9	25	mg/L	02.28.17 13:29	
Toluene	<0.00200	0.100	0.0961	96	0.106	106	70-125	10	25	mg/L	02.28.17 13:29	
Ethylbenzene	<0.00200	0.100	0.0941	94	0.105	105	71-129	11	25	mg/L	02.28.17 13:29	
m_p-Xylenes	<0.00200	0.200	0.184	92	0.205	103	70-131	11	25	mg/L	02.28.17 13:29	
o-Xylene	<0.00200	0.100	0.0959	96	0.106	106	71-133	10	25	mg/L	02.28.17 13:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	115		108		80-120	%	02.28.17 13:29
4-Bromofluorobenzene	104		108		80-120	%	02.28.17 13:29



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Phoenix, Arizona (480-355-0900)

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Client / Reporting Information				Project Information				Xenco Quote #		Xenco Job #		Matrix Codes			
Company Name / Branch: <u>TRC Solutions, Inc.</u>				Project Name/Number: <u>Bob Durham</u>								W = Water S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water WI = Wipe O = Oil WW = Waste Water A = Air			
Company Address: <u>2057 Commerce Midland, TX 79703</u>				Project Location: <u>Midland, NM</u>											
Email: <u>ced@trcsolutions.com</u> Phone No: <u>432-520-7720</u>				Invoice To: <u>plans</u>											
Project Contact: <u>Carl Stenley</u>				PO Number: <u>TVM-LF-2000-7</u>											
Samplers Name: <u>Carl Stenley</u>															
No.	Field ID / Point of Collection	Sample Depth	Collection Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	Field Comments
1	MW1		2/24/7	1435	GW	3	7								
2	MW12		2/24/7	1510											
3	MW13		2/24/7	1530											
4	MW2		2/24/7	1615											
5	MW32		2/23/7	1150											
6	MW38		2/23/7	1220											
7	MW4		2/23/7	1255											
8	MW5		2/23/7	1320											
9	MW56		2/23/7	1345											
10															
Turnaround Time (Business days)															
Data Deliverable Information															
Notes:															
Same Day TAT ☒ 5 Day TAT ☐ Level II Std QC ☐ Level IV (Full Data Pkg /raw data) ☐															
Next Day EMERGENCY ☐ 7 Day TAT ☐ Level III Std QC+ Forms ☐ TRRP Level IV ☐															
2 Day EMERGENCY ☐ Contract TAT ☐ Level 3 (CLP Forms) ☐ UST / RG-411 ☐															
3 Day EMERGENCY ☐ TRRP Checklist ☐															
TAT Starts Day received by Lab, if received by 5:00 pm															
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY															
FED-EX / UPS: Tracking #															
Relinquished by Sampler: <u>Carl Stenley</u> Date Time: <u>2/24/7 10:02</u> Received By: <u>Bob Durham</u> Date Time: <u>2/24/7 10:02</u>															
Relinquished by: <u>Carl Stenley</u> Date Time: <u>2/24/7 10:02</u> Received By: <u>Bob Durham</u> Date Time: <u>2/24/7 10:02</u>															
Relinquished by: <u>Carl Stenley</u> Date Time: <u>2/24/7 10:02</u> Received By: <u>Bob Durham</u> Date Time: <u>2/24/7 10:02</u>															
Temp: IR ID: R-8 CF: + 0.1 5.0°C Corrected Temp: 5.1°C															

Notice: Notice: Signature at this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc

Date/ Time Received: 02/24/2017 10:00:00 AM

Work Order #: 547322

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : r8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	No
#21 VOC samples have zero headspace?	Yes
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	Yes pH will be taken by analyst before analysis
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by:

Minerva Rios

Date: 02/24/2017

Checklist reviewed by:

Holly Taylor

Date: 02/24/2017



Certificate of Analysis Summary 554317

TRC Solutions, Inc, Midland, TX

Project Name: TNM-LF-2000-7

Project Id:
Contact: Curt Stanley
Project Location:

Date Received in Lab: Thu Jun-01-17 08:25 am
Report Date: 08-JUN-17
Project Manager: Liz Givens

Analysis Requested	Lab Id:	554317-019					
	Field Id:	MW12					
	Depth:						
	Matrix:	GROUND WATER					
	Sampled:	May-31-17 15:29					
BTEX by EPA 8021B	Extracted:	Jun-06-17 07:00					
	Analyzed:	Jun-06-17 21:00					
	Units/RL:	mg/L RL					
	Benzene	<0.00200 0.00200					
	Toluene	0.00891 0.00200					
Ethylbenzene		<0.00200 0.00200					
m,p-Xylenes		<0.00400 0.00400					
o-Xylene		<0.00200 0.00200					
Total Xylenes		<0.00200 0.00200					
Total BTEX		0.00891 0.00200					

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Brandi Ritcherson

Brandi Ritcherson
Project Manager



Certificate of Analysis Summary 554317

TRC Solutions, Inc, Midland, TX

Project Name: TNM-LF-2000-7

Project Id:

Contact: Curt Stanley

Project Location:

Date Received in Lab: Thu Jun-01-17 08:25 am

Report Date: 08-JUN-17

Project Manager: Liz Givens

Analysis Requested	Lab Id:	554317-001	554317-002	554317-003	554317-004	554317-005	554317-006
	Field Id:	MW10	MW15	MW16	MW23	MW3	MW31
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER
	Sampled:	May-30-17 13:30	May-30-17 13:48	May-30-17 14:27	May-30-17 14:42	May-30-17 15:01	May-30-17 15:28
BTEX by EPA 8021B	Extracted:	Jun-06-17 07:00	Jun-06-17 07:00	Jun-06-17 07:00	Jun-06-17 07:00	Jun-06-17 07:00	Jun-06-17 07:00
	Analyzed:	Jun-06-17 18:33	Jun-06-17 16:08	Jun-06-17 18:17	Jun-06-17 16:25	Jun-06-17 16:41	Jun-06-17 16:57
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
	Benzene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
	Toluene	<0.00200 0.00200	<0.00200 0.00200	0.00354 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
	m,p-Xylenes	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400
	o-Xylene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
	Total BTEX	<0.00200 0.00200	<0.00200 0.00200	0.00354 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200

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Brandi Ritcherson

Brandi Ritcherson
Project Manager



Certificate of Analysis Summary 554317

TRC Solutions, Inc, Midland, TX

Project Name: TNM-LF-2000-7

Project Id:
Contact: Curt Stanley
Project Location:

Date Received in Lab: Thu Jun-01-17 08:25 am
Report Date: 08-JUN-17
Project Manager: Liz Givens

Analysis Requested	Lab Id:	554317-013	554317-014	554317-015	554317-016	554317-017	554317-018
	Field Id:	MW2	MW32	MW38	MW4	MW5	MW56
	Depth:						
	Matrix:	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER
	Sampled:	May-31-17 13:16	May-31-17 13:38	May-31-17 13:54	May-31-17 14:12	May-31-17 14:28	May-31-17 14:50
BTEX by EPA 8021B	Extracted:	Jun-06-17 07:00	Jun-06-17 07:00	Jun-06-17 07:00	Jun-06-17 07:00	Jun-06-17 07:00	Jun-06-17 15:00
	Analyzed:	Jun-06-17 19:55	Jun-06-17 20:11	Jun-06-17 20:27	Jun-06-17 20:43	Jun-06-17 21:16	Jun-06-17 23:25
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
	Benzene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
	Toluene	0.00421 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.00564 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	0.00684 0.00400	<0.00400 0.00400
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.00684 0.00200	<0.00200 0.00200
Total BTEX		0.00421 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	0.0125 0.00200	<0.00200 0.00200

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Brandi Ritcherson

Brandi Ritcherson
Project Manager



Certificate of Analysis Summary 554317

TRC Solutions, Inc, Midland, TX

Project Name: TNM-LF-2000-7



Date Received in Lab: Thu Jun-01-17 08:25 am
Report Date: 08-JUN-17
Project Manager: Liz Givens

Project ID:
Contact: Curt Stanley
Project Location:

Analysis Requested	Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	Extracted:	Analyzed:	Units/RL:	554317-007	554317-008	554317-009	554317-010	554317-011	554317-012
	Field Id:	Depth:	Matrix:	Sampled:	Extracted:	Analyzed:	Units/RL:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	Field Id:	Depth:	Matrix:	Sampled:	Extracted:	Analyzed:	Units/RL:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	Field Id:	Depth:	Matrix:	Sampled:	Extracted:	Analyzed:	Units/RL:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	Field Id:	Depth:	Matrix:	Sampled:	Extracted:	Analyzed:	Units/RL:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
BTEX by EPA 8021B														
Benzene														
Toluene														
Ethylbenzene														
m,p-Xylenes														
o-Xylene														
Total Xylenes														
Total BTEX														

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi
Version: 1.0%

Brandi Ritcherson

Brandi Ritcherson
Project Manager

Analytical Report 554317

for
TRC Solutions, Inc

Project Manager: Curt Stanley

TNM-LF-2000-7

08-JUN-17

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



08-JUN-17

Project Manager: **Curt Stanley**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **554317**
TNM-LF-2000-7
Project Address:

Curt Stanley:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 554317. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 554317 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brandi Ritcherson

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW10	W	05-30-17 13:30		554317-001
MW15	W	05-30-17 13:48		554317-002
MW16	W	05-30-17 14:27		554317-003
MW23	W	05-30-17 14:42		554317-004
MW3	W	05-30-17 15:01		554317-005
MW31	W	05-30-17 15:28		554317-006
MW37	W	05-30-17 15:44		554317-007
MW6	W	05-30-17 16:31		554317-008
MW7	W	05-31-17 11:00		554317-009
MW8	W	05-31-17 11:32		554317-010
MW1	W	05-31-17 12:02		554317-011
MW13	W	05-31-17 12:28		554317-012
MW2	W	05-31-17 13:16		554317-013
MW32	W	05-31-17 13:38		554317-014
MW38	W	05-31-17 13:54		554317-015
MW4	W	05-31-17 14:12		554317-016
MW5	W	05-31-17 14:28		554317-017
MW56	W	05-31-17 14:50		554317-018
MW12	W	05-31-17 15:29		554317-019



CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: TNM-LF-2000-7

Project ID:

Work Order Number(s): 554317

Report Date: 08-JUN-17

Date Received: 06/01/2017

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW10
Lab Sample Id: 554317-001

Matrix: Ground Water
Date Collected: 05.30.17 13.30

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 18.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 18.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 18.33	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 18.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 18.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 18.33	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 18.33	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114		%	80-120	06.06.17 18.33	
4-Bromofluorobenzene	460-00-4	92		%	80-120	06.06.17 18.33	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW15
Lab Sample Id: 554317-002

Matrix: Ground Water
Date Collected: 05.30.17 13.48

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3018995

Prep Method: SW5030B

% Moisture:

Date Prep: 06.06.17 07.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 16.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 16.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 16.08	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 16.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 16.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 16.08	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 16.08	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	80		%	80-120	06.06.17 16.08	
4-Bromofluorobenzene	460-00-4	93		%	80-120	06.06.17 16.08	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW16
Lab Sample Id: 554317-003

Matrix: Ground Water
Date Collected: 05.30.17 14.27

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 18.17	U	1
Toluene	108-88-3	0.00354	0.00200	mg/L	06.06.17 18.17		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 18.17	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 18.17	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 18.17	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 18.17	U	1
Total BTEX		0.00354	0.00200	mg/L	06.06.17 18.17		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	84		%	80-120	06.06.17 18.17	
4-Bromofluorobenzene	460-00-4	107		%	80-120	06.06.17 18.17	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW23
Lab Sample Id: 554317-004

Matrix: Ground Water
Date Collected: 05.30.17 14.42

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 16.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 16.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 16.25	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 16.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 16.25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 16.25	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 16.25	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89		%	80-120	06.06.17 16.25	
4-Bromofluorobenzene	460-00-4	99		%	80-120	06.06.17 16.25	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW3
Lab Sample Id: 554317-005

Matrix: Ground Water
Date Collected: 05.30.17 15.01

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 16.41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 16.41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 16.41	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 16.41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 16.41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 16.41	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 16.41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	81	%	80-120	06.06.17 16.41		
4-Bromofluorobenzene	460-00-4	97	%	80-120	06.06.17 16.41		



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW31
Lab Sample Id: 554317-006

Matrix: Ground Water
Date Collected: 05.30.17 15.28

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 16.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 16.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 16.57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 16.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 16.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 16.57	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 16.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	80-120	06.06.17 16.57		
4-Bromofluorobenzene	460-00-4	86	%	80-120	06.06.17 16.57		



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW37
Lab Sample Id: 554317-007

Matrix: Ground Water
Date Collected: 05.30.17 15.44

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 17.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 17.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 17.13	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 17.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 17.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 17.13	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 17.13	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90		%	80-120	06.06.17 17.13	
4-Bromofluorobenzene	460-00-4	88		%	80-120	06.06.17 17.13	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW6
Lab Sample Id: 554317-008

Matrix: Ground Water
Date Collected: 05.30.17 16.31

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 18.01	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 18.01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 18.01	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 18.01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 18.01	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 18.01	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 18.01	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90		%	80-120	06.06.17 18.01	
4-Bromofluorobenzene	460-00-4	94		%	80-120	06.06.17 18.01	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW7

Matrix: Ground Water

Date Received: 06.01.17 08.25

Lab Sample Id: 554317-009

Date Collected: 05.31.17 11.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 17.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 17.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 17.30	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 17.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 17.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 17.30	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 17.30	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93		%	80-120	06.06.17 17.30	
4-Bromofluorobenzene	460-00-4	86		%	80-120	06.06.17 17.30	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW8
Lab Sample Id: 554317-010

Matrix: Ground Water
Date Collected: 05.31.17 11.32

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 17.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 17.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 17.45	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 17.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 17.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 17.45	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 17.45	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93		%	80-120	06.06.17 17.45	
4-Bromofluorobenzene	460-00-4	83		%	80-120	06.06.17 17.45	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW1
Lab Sample Id: 554317-011

Matrix: Ground Water
Date Collected: 05.31.17 12.02

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 19.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 19.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 19.22	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 19.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 19.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 19.22	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 19.22	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	82		%	80-120	06.06.17 19.22	
4-Bromofluorobenzene	460-00-4	95		%	80-120	06.06.17 19.22	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW13
Lab Sample Id: 554317-012

Matrix: Ground Water
Date Collected: 05.31.17 12.28

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 19.38	U	1
Toluene	108-88-3	0.00459	0.00200	mg/L	06.06.17 19.38		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 19.38	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 19.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 19.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 19.38	U	1
Total BTEX		0.00459	0.00200	mg/L	06.06.17 19.38		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93		%	80-120	06.06.17 19.38	
4-Bromofluorobenzene	460-00-4	86		%	80-120	06.06.17 19.38	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW2

Matrix: Ground Water

Date Received: 06.01.17 08.25

Lab Sample Id: 554317-013

Date Collected: 05.31.17 13.16

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 19.55	U	1
Toluene	108-88-3	0.00421	0.00200	mg/L	06.06.17 19.55		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 19.55	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 19.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 19.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 19.55	U	1
Total BTEX		0.00421	0.00200	mg/L	06.06.17 19.55		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	80-120	06.06.17 19.55		
4-Bromofluorobenzene	460-00-4	81	%	80-120	06.06.17 19.55		



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW32
Lab Sample Id: 554317-014

Matrix: Ground Water
Date Collected: 05.31.17 13.38

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 20.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 20.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 20.11	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 20.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 20.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 20.11	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 20.11	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97		%	80-120	06.06.17 20.11	
4-Bromofluorobenzene	460-00-4	83		%	80-120	06.06.17 20.11	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW38
Lab Sample Id: 554317-015

Matrix: Ground Water
Date Collected: 05.31.17 13.54

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 20.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 20.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 20.27	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 20.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 20.27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 20.27	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 20.27	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96		%	80-120	06.06.17 20.27	
4-Bromofluorobenzene	460-00-4	82		%	80-120	06.06.17 20.27	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW4
Lab Sample Id: 554317-016

Matrix: Ground Water
Date Collected: 05.31.17 14.12

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 20.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 20.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 20.43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 20.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 20.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 20.43	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 20.43	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81		%	80-120	06.06.17 20.43	
4-Bromofluorobenzene	460-00-4	81		%	80-120	06.06.17 20.43	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW5
Lab Sample Id: 554317-017

Matrix: Ground Water
Date Collected: 05.31.17 14.28

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 21.16	U	1
Toluene	108-88-3	0.00564	0.00200	mg/L	06.06.17 21.16		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 21.16	U	1
m,p-Xylenes	179601-23-1	0.00684	0.00400	mg/L	06.06.17 21.16		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 21.16	U	1
Total Xylenes	1330-20-7	0.00684	0.00200	mg/L	06.06.17 21.16		1
Total BTEX		0.0125	0.00200	mg/L	06.06.17 21.16		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91		%	80-120	06.06.17 21.16	
4-Bromofluorobenzene	460-00-4	92		%	80-120	06.06.17 21.16	



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW56
Lab Sample Id: 554317-018

Matrix: Ground Water
Date Collected: 05.31.17 14.50

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 15.00

Seq Number: 3019080

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 23.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	06.06.17 23.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 23.25	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 23.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 23.25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 23.25	U	1
Total BTEX		<0.00200	0.00200	mg/L	06.06.17 23.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	80-120	06.06.17 23.25		
4-Bromofluorobenzene	460-00-4	91	%	80-120	06.06.17 23.25		



Certificate of Analytical Results 554317



TRC Solutions, Inc, Midland, TX

TNM-LF-2000-7

Sample Id: MW12
Lab Sample Id: 554317-019

Matrix: Ground Water
Date Collected: 05.31.17 15.29

Date Received: 06.01.17 08.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 06.06.17 07.00

Seq Number: 3018995

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	06.06.17 21.00	U	1
Toluene	108-88-3	0.00891	0.00200	mg/L	06.06.17 21.00		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	06.06.17 21.00	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	06.06.17 21.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	06.06.17 21.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	06.06.17 21.00	U	1
Total BTEX		0.00891	0.00200	mg/L	06.06.17 21.00		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	80-120	06.06.17 21.00		
4-Bromofluorobenzene	460-00-4	91	%	80-120	06.06.17 21.00		



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- **** Surrogate recovered outside laboratory control limit.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- MDL** Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection
- PQL** Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation
- DL** Method Detection Limit
- NC** Non-Calculable
- +** NELAC certification not offered for this compound.
- *** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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TRC Solutions, Inc
TNM-LF-2000-7

Analytical Method: BTEX by EPA 8021B

Seq Number: 3018995

MB Sample Id: 725659-1-BLK

Matrix: Water

LCS Sample Id: 725659-1-BKS

Prep Method: SW5030B

Date Prep: 06.06.17

LCSD Sample Id: 725659-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0982	98	0.0937	94	70-125	5	25	mg/L	06.06.17 06:48	
Toluene	<0.00200	0.100	0.0884	88	0.0874	87	70-125	1	25	mg/L	06.06.17 06:48	
Ethylbenzene	<0.00200	0.100	0.0846	85	0.0844	84	71-129	0	25	mg/L	06.06.17 06:48	
m,p-Xylenes	<0.00400	0.200	0.185	93	0.192	96	70-131	4	25	mg/L	06.06.17 06:48	
o-Xylene	<0.00200	0.100	0.0847	85	0.0901	90	71-133	6	25	mg/L	06.06.17 06:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	81		98		96		80-120	%	06.06.17 06:48
4-Bromofluorobenzene	81		110		111		80-120	%	06.06.17 06:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3019080

MB Sample Id: 725688-1-BLK

Matrix: Water

LCS Sample Id: 725688-1-BKS

Prep Method: SW5030B

Date Prep: 06.06.17

LCSD Sample Id: 725688-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0939	94	0.0959	96	70-125	2	25	mg/L	06.06.17 21:48	
Toluene	<0.00200	0.100	0.0899	90	0.0922	92	70-125	3	25	mg/L	06.06.17 21:48	
Ethylbenzene	<0.00200	0.100	0.0916	92	0.0857	86	71-129	7	25	mg/L	06.06.17 21:48	
m,p-Xylenes	<0.00400	0.200	0.203	102	0.192	96	70-131	6	25	mg/L	06.06.17 21:48	
o-Xylene	<0.00200	0.100	0.104	104	0.0911	91	71-133	13	25	mg/L	06.06.17 21:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	82		120		97		80-120	%	06.06.17 21:48
4-Bromofluorobenzene	88		102		96		80-120	%	06.06.17 21:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3018995

Parent Sample Id: 554622-001

Matrix: Water

MS Sample Id: 554622-001 S

Prep Method: SW5030B

Date Prep: 06.06.17

MSD Sample Id: 554622-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0935	94	0.0962	96	70-125	3	25	mg/L	06.06.17 07:53	
Toluene	<0.00200	0.100	0.0945	95	0.0927	93	70-125	2	25	mg/L	06.06.17 07:53	
Ethylbenzene	<0.00200	0.100	0.0826	83	0.0851	85	71-129	3	25	mg/L	06.06.17 07:53	
m,p-Xylenes	<0.00400	0.200	0.181	91	0.194	97	70-131	7	25	mg/L	06.06.17 07:53	
o-Xylene	<0.00200	0.100	0.0962	96	0.0972	97	71-133	1	25	mg/L	06.06.17 07:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	118		83		80-120	%	06.06.17 07:53
4-Bromofluorobenzene	109		99		80-120	%	06.06.17 07:53

TRC Solutions, Inc
TNM-LF-2000-7

Analytical Method: BTEX by EPA 8021B

Seq Number: 3019080

Parent Sample Id: 554317-018

Matrix: Ground Water

MS Sample Id: 554317-018 S

Prep Method: SW5030B

Date Prep: 06.06.17

MSD Sample Id: 554317-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0902	90	0.101	101	70-125	11	25	mg/L	06.06.17 22:20	
Toluene	<0.00200	0.100	0.0984	98	0.0887	89	70-125	10	25	mg/L	06.06.17 22:20	
Ethylbenzene	<0.00200	0.100	0.0796	80	0.0846	85	71-129	6	25	mg/L	06.06.17 22:20	
m,p-Xylenes	<0.00400	0.200	0.173	87	0.188	94	70-131	8	25	mg/L	06.06.17 22:20	
o-Xylene	<0.00200	0.100	0.0796	80	0.0881	88	71-133	10	25	mg/L	06.06.17 22:20	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene			82		101		80-120			%	06.06.17 22:20	
4-Bromofluorobenzene			90		87		80-120			%	06.06.17 22:20	



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Service Center - Amarillo, TX (806) 670-4514
Service Center - Hobbs, NM (575) 392-7550

CHAIN OF CUSTODY

Page 1 of 2

Revision 2016-1

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name / Branch: TRC Solutions				Project Name/Number: INM-LF-2000-7											
Company Address: 2057 Commerce Dr Midland TX 79703				Project Location: Plains											
Email: 432520-7720				Invoice To: PO Number:											
Phone No: 432520-7720															
Project Contact: Cost Stanley															
Samplers Name: Henny															
No.	Field ID / Point of Collection	Sample Depth	Collection Date	Time	Matrix	# of bottles	Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments	
1	MMW 10		5-30-17	1330	GW	3	X								
2	MMW 15			1348											
3	MMW 16			1427											
4	MMW 23			1443											
5	MMW 3			1501											
6	MMW 31			1508											
7	MMW 37			1544											
8	MMW 6			1631											
9	MMW 7		5-31-17	1100											
10	MMW 8		5-31-17	1112											
Turnaround Time (Business days)															
☐ Same Day TAT ☒ 5 Day TAT ☐ Level II Std QC ☐ Level IV (Full Data Pkg /raw data)															
☐ Next Day EMERGENCY ☐ 7 Day TAT ☐ Level III Std QC* Forms ☐ TRRP Level IV															
☐ 2 Day EMERGENCY ☐ Contract TAT ☐ Level 3 (CLP Forms) ☐ UST / RG 411															
☐ 3 Day EMERGENCY ☐ Level II Report with TRRP checklist															
TAT Starts Day received by Lab, if received by 5:00 pm															
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY															
Relinquished by Sampler: Henny Date Time: 6-1-17 08:35 Received By: MS Date Time: 6-1-17															
Relinquished by: Henny Date Time: 6-1-17 08:35 Received By: MS Date Time: 6-1-17															
Relinquished by: Henny Date Time: 6-1-17 08:35 Received By: MS Date Time: 6-1-17															
Relinquished by: Henny Date Time: 6-1-17 08:35 Received By: MS Date Time: 6-1-17															

Temp: **3.7** IR ID: **R-8**

CF: **(0-6: -0.2°C)**

Corrected Temp: **3.5**

On/Off	Cooler Temp.	Thermo. Corr. Factor
☒		

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XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc

Date/ Time Received: 06/01/2017 08:25:00 AM

Work Order #: 554317

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	N/A
#21 VOC samples have zero headspace?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by:

Marithza Anaya
Marithza Anaya

Date: 06/01/2017

Checklist reviewed by:

Holly Taylor
Holly Taylor

Date: 06/05/2017