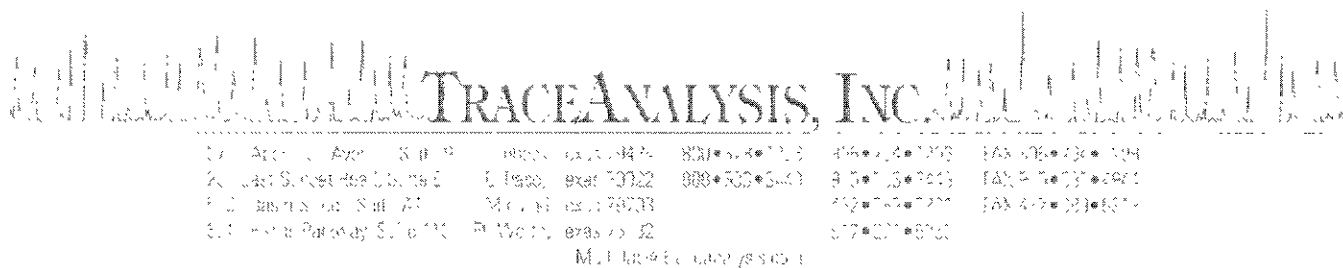


1R - __951__

REPORTS
(Laboratory Results)

DATE:

June 2011



Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: August 26, 2010

Work Order: 10081818



Project Location: South of Monument, NM
Project Name: South Monument Gathering Sour
Project Number: 2001-11193

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
241665	West Wall-1, 10'	soil	2010-08-17	13:37	2010-08-17
241666	West Wall-2, 10'	soil	2010-08-17	13:33	2010-08-17
241667	West Wall-3, 10'	soil	2010-08-17	13:29	2010-08-17
241668	NW Wall, 10'	soil	2010-08-17	13:41	2010-08-17
241669	NE Wall, 10'	soil	2010-08-17	13:45	2010-08-17
241670	East Wall-1, 10'	soil	2010-08-17	13:49	2010-08-17
241671	East Wall-2, 10'	soil	2010-08-17	13:54	2010-08-17
241672	East Wall-3, 10'	soil	2010-08-17	13:58	2010-08-17

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.

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 that reads "Michael Abel". The signature is written in a cursive, flowing style.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-08-17 and assigned to work order 10081818. Samples for work order 10081818 were received intact at a temperature of 4.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	62500	2010-08-23 at 16:00	72886	2010-08-23 at 19:09
BTEX	S 8021B	62501	2010-08-24 at 15:00	72904	2010-08-24 at 19:56
TPH DRO - NEW	S 8015 D	62430	2010-08-20 at 13:56	72816	2010-08-20 at 13:56
TPH GRO	S 8015 D	62500	2010-08-23 at 16:00	72887	2010-08-23 at 19:38
TPH GRO	S 8015 D	62501	2010-08-24 at 15:00	72905	2010-08-24 at 20:23

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 10081818 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

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2001-11193

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Analytical Report

Sample: 241665 - West Wall-1, 10'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-08-20	Analyzed By:	kg
QC Batch:	72816	Sample Preparation:	2010-08-20	Prepared By:	kg
Prep Batch:	62430				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		101	mg/Kg	1	100	101	70 - 130

Sample: 241665 - West Wall-1, 10'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-08-23	Analyzed By:	AG
QC Batch:	72887	Sample Preparation:	2010-08-23	Prepared By:	AG
Prep Batch:	62500				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.39	mg/Kg	1	2.00	120	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.92	mg/Kg	1	2.00	96	42 - 159

Sample: 241666 - West Wall-2, 10'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-08-20	Analyzed By:	kg
QC Batch:	72816	Sample Preparation:	2010-08-20	Prepared By:	kg
Prep Batch:	62430				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		104	mg/Kg	1	100	104	70 - 130

Sample: 241666 - West Wall-2, 10'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 72887 Date Analyzed: 2010-08-23 Analyzed By: AG
Prep Batch: 62500 Sample Preparation: 2010-08-23 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.28	mg/Kg	1	2.00	114	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.81	mg/Kg	1	2.00	90	42 - 159

Sample: 241667 - West Wall-3, 10'

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 72886 Date Analyzed: 2010-08-23 Analyzed By: AG
Prep Batch: 62500 Sample Preparation: 2010-08-23 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.94	mg/Kg	1	2.00	97	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.56	mg/Kg	1	2.00	78	38.4 - 157

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Sample: 241667 - West Wall-3, 10'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	72816	Date Analyzed:	2010-08-20
Prep Batch:	62430	Sample Preparation:	2010-08-20
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		94.2	mg/Kg	1	100	94	70 - 130

Sample: 241667 - West Wall-3, 10'

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	72887	Date Analyzed:	2010-08-23
Prep Batch:	62500	Sample Preparation:	2010-08-23
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.04	mg/Kg	1	2.00	102	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.59	mg/Kg	1	2.00	80	42 - 159

Sample: 241668 - NW Wall, 10'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	72816	Date Analyzed:	2010-08-20
Prep Batch:	62430	Sample Preparation:	2010-08-20
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		112	mg/Kg	1	100	112	70 - 130

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Sample: 241668 - NW Wall, 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 72905
Prep Batch: 62501

Analytical Method: S 8015 D
Date Analyzed: 2010-08-24
Sample Preparation: 2010-08-24

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.49	mg/Kg	1	2.00	124	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.88	mg/Kg	1	2.00	94	42 - 159

Sample: 241669 - NE Wall, 10'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 72816
Prep Batch: 62430

Analytical Method: S 8015 D
Date Analyzed: 2010-08-20
Sample Preparation: 2010-08-20

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		106	mg/Kg	1	100	106	70 - 130

Sample: 241669 - NE Wall, 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 72905
Prep Batch: 62501

Analytical Method: S 8015 D
Date Analyzed: 2010-08-24
Sample Preparation: 2010-08-24

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.27	mg/Kg	1	2.00	114	48.5 - 152

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sample continued ...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		1.75	mg/Kg	1	2.00	88	42 - 159

Sample: 241670 - East Wall-1, 10'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	72816	Date Analyzed:	2010-08-20	Analyzed By:	kg
Prep Batch:	62430	Sample Preparation:	2010-08-20	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		107	mg/Kg	1	100	107	70 - 130

Sample: 241670 - East Wall-1, 10'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	72905	Date Analyzed:	2010-08-24	Analyzed By:	AG
Prep Batch:	62501	Sample Preparation:	2010-08-24	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.41	mg/Kg	1	2.00	120	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.83	mg/Kg	1	2.00	92	42 - 159

Sample: 241671 - East Wall-2, 10'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	72816	Date Analyzed:	2010-08-20	Analyzed By:	kg
Prep Batch:	62430	Sample Preparation:	2010-08-20	Prepared By:	kg

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Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		93.3	mg/Kg	1	100	93	70 - 130

Sample: 241671 - East Wall-2, 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 72905
Prep Batch: 62501

Analytical Method: S 8015 D
Date Analyzed: 2010-08-24
Sample Preparation: 2010-08-24

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.39	mg/Kg	1	2.00	120	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.78	mg/Kg	1	2.00	89	42 - 159

Sample: 241672 - East Wall-3, 10'

Laboratory: Midland
Analysis: BTEX
QC Batch: 72904
Prep Batch: 62501

Analytical Method: S 8021B
Date Analyzed: 2010-08-24
Sample Preparation: 2010-08-24

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.99	mg/Kg	1	2.00	100	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.53	mg/Kg	1	2.00	76	38.4 - 157

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Sample: 241672 - East Wall-3, 10'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 72816
Prep Batch: 62430

Analytical Method: S 8015 D
Date Analyzed: 2010-08-20
Sample Preparation: 2010-08-20

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		104	mg/Kg	1	100	104	70 - 130

Sample: 241672 - East Wall-3, 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 72905
Prep Batch: 62501

Analytical Method: S 8015 D
Date Analyzed: 2010-08-24
Sample Preparation: 2010-08-24

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.64	mg/Kg	1	2.00	82	42 - 159

Method Blank (1) QC Batch: 72816

QC Batch: 72816
Prep Batch: 62430

Date Analyzed: 2010-08-20
QC Preparation: 2010-08-20

Analyzed By: kg
Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.5	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		90.2	mg/Kg	1	100	90	70 - 130

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Method Blank (1) QC Batch: 72886

QC Batch: 72886 Date Analyzed: 2010-08-23 Analyzed By: AG
Prep Batch: 62500 QC Preparation: 2010-08-23 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02
Toluene		<0.00950	mg/Kg	0.02
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.87	mg/Kg	1	2.00	94	66.6 - 122
4-Bromofluorobenzene (4-BFB)		1.29	mg/Kg	1	2.00	64	55.4 - 132

Method Blank (1) QC Batch: 72887

QC Batch: 72887 Date Analyzed: 2010-08-23 Analyzed By: AG
Prep Batch: 62500 QC Preparation: 2010-08-23 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.17	mg/Kg	1	2.00	108	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.40	mg/Kg	1	2.00	70	52.4 - 130

Method Blank (1) QC Batch: 72904

QC Batch: 72904 Date Analyzed: 2010-08-24 Analyzed By: AG
Prep Batch: 62501 QC Preparation: 2010-08-24 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02
Toluene		<0.00950	mg/Kg	0.02
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.92	mg/Kg	1	2.00	96	66.6 - 122
4-Bromofluorobenzene (4-BFB)		1.38	mg/Kg	1	2.00	69	55.4 - 132

Method Blank (1) QC Batch: 72905

QC Batch: 72905 Date Analyzed: 2010-08-24 Analyzed By: AG
Prep Batch: 62501 QC Preparation: 2010-08-24 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.49	mg/Kg	1	2.00	74	52.4 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 72816 Date Analyzed: 2010-08-20 Analyzed By: kg
Prep Batch: 62430 QC Preparation: 2010-08-20 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	244	mg/Kg	1	250	<14.5	98	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	236	mg/Kg	1	250	<14.5	94	57.4 - 133.4	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
n-Tricosane	110	108	mg/Kg	1	100	110	108	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 72886 Date Analyzed: 2010-08-23 Analyzed By: AG
Prep Batch: 62500 QC Preparation: 2010-08-23 Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.11	mg/Kg	1	2.00	<0.0150	106	81.9 - 108
Toluene	2.01	mg/Kg	1	2.00	<0.00950	100	81.9 - 107
Ethylbenzene	1.86	mg/Kg	1	2.00	<0.0106	93	78.4 - 107
Xylene	5.58	mg/Kg	1	6.00	<0.00930	93	79.1 - 107

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.08	mg/Kg	1	2.00	<0.0150	104	81.9 - 108	1	20
Toluene	1.99	mg/Kg	1	2.00	<0.00950	100	81.9 - 107	1	20
Ethylbenzene	1.81	mg/Kg	1	2.00	<0.0106	90	78.4 - 107	3	20
Xylene	5.47	mg/Kg	1	6.00	<0.00930	91	79.1 - 107	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)	2.00	1.90	mg/Kg	1	2.00	100	95	70.2 - 114
4-Bromofluorobenzene (4-BFB)	1.71	1.67	mg/Kg	1	2.00	86	84	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: 72887
Prep Batch: 62500

Date Analyzed: 2010-08-23
QC Preparation: 2010-08-23

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.2	mg/Kg	1	20.0	<1.65	76	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.7	mg/Kg	1	20.0	<1.65	78	69.9 - 95.4	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.21	2.25	mg/Kg	1	2.00	110	112	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.67	1.71	mg/Kg	1	2.00	84	86	68.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 72904
Prep Batch: 62501

Date Analyzed: 2010-08-24
QC Preparation: 2010-08-24

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.04	mg/Kg	1	2.00	<0.0150	102	81.9 - 108
Toluene	1.92	mg/Kg	1	2.00	<0.00950	96	81.9 - 107
Ethylbenzene	1.77	mg/Kg	1	2.00	<0.0106	88	78.4 - 107
Xylene	5.30	mg/Kg	1	6.00	<0.00930	88	79.1 - 107

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.09	mg/Kg	1	2.00	<0.0150	104	81.9 - 108	2	20
Toluene	1.98	mg/Kg	1	2.00	<0.00950	99	81.9 - 107	3	20
Ethylbenzene	1.82	mg/Kg	1	2.00	<0.0106	91	78.4 - 107	3	20
Xylene	5.42	mg/Kg	1	6.00	<0.00930	90	79.1 - 107	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)	1.94	1.90	mg/Kg	1	2.00	97	95	70.2 - 114
4-Bromofluorobenzene (4-BFB)	1.64	1.57	mg/Kg	1	2.00	82	78	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: 72905
Prep Batch: 62501

Date Analyzed: 2010-08-24
QC Preparation: 2010-08-24

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.8	mg/Kg	1	20.0	<1.65	74	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.0	mg/Kg	1	20.0	<1.65	75	69.9 - 95.4	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)	2.21	2.19	mg/Kg	1	2.00	110	110	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.62	1.58	mg/Kg	1	2.00	81	79	68.2 - 132

Matrix Spike (MS-1) Spiked Sample: 241849

QC Batch: 72816
Prep Batch: 62430

Date Analyzed: 2010-08-20
QC Preparation: 2010-08-20

Analyzed By: kg
Prepared By: kg

Report Date: August 26, 2010
2001-11193

Work Order: 10081818
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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	247	mg/Kg	1	250	<14.5	99	35.2 - 167.1

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	247	mg/Kg	1	250	<14.5	99	35.2 - 167.1	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	105	103	mg/Kg	1	100	105	103	70 - 130

Matrix Spike (MS-1) Spiked Sample: 241987

QC Batch: 72886
Prep Batch: 62500

Date Analyzed: 2010-08-23
QC Preparation: 2010-08-23

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.22	mg/Kg	1	2.00	<0.0150	111	80.5 - 112
Toluene	2.22	mg/Kg	1	2.00	<0.00950	111	82.4 - 113
Ethylbenzene	2.29	mg/Kg	1	2.00	<0.0106	114	83.9 - 114
Xylene	6.67	mg/Kg	1	6.00	<0.00930	111	84 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.20	mg/Kg	1	2.00	<0.0150	110	80.5 - 112	1	20
Toluene	2.21	mg/Kg	1	2.00	<0.00950	110	82.4 - 113	0	20
Ethylbenzene	2.29	mg/Kg	1	2.00	<0.0106	114	83.9 - 114	0	20
Xylene	6.63	mg/Kg	1	6.00	<0.00930	110	84 - 114	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)	2.33	2.09	mg/Kg	1	2	116	104	41.3 - 117
4-Bromofluorobenzene (4-BFB)	2.09	1.91	mg/Kg	1	2	104	96	35.5 - 129

Matrix Spike (MS-1) Spiked Sample: 241595

QC Batch: 72887
Prep Batch: 62500

Date Analyzed: 2010-08-23
QC Preparation: 2010-08-23

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.6	mg/Kg	1	20.0	<1.65	83	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.1	mg/Kg	1	20.0	<1.65	76	61.8 - 114	10	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.27	2.31	mg/Kg	1	2	114	116	50 - 162
4-Bromofluorobenzene (4-BFB)	2.02	2.00	mg/Kg	1	2	101	100	50 - 162

Matrix Spike (MS-1) Spiked Sample: 241968

QC Batch: 72904
Prep Batch: 62501

Date Analyzed: 2010-08-24
QC Preparation: 2010-08-24

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.11	mg/Kg	1	2.00	<0.0150	106	80.5 - 112
Toluene	2.07	mg/Kg	1	2.00	<0.00950	104	82.4 - 113
Ethylbenzene	2.02	mg/Kg	1	2.00	<0.0106	101	83.9 - 114
Xylene	5.97	mg/Kg	1	6.00	<0.00930	100	84 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	¹ 2.31	mg/Kg	1	2.00	<0.0150	116	80.5 - 112	9	20
Toluene	2.27	mg/Kg	1	2.00	<0.00950	114	82.4 - 113	9	20
Ethylbenzene	2.22	mg/Kg	1	2.00	<0.0106	111	83.9 - 114	9	20
Xylene	6.55	mg/Kg	1	6.00	<0.00930	109	84 - 114	9	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.06	2.06	mg/Kg	1	2	103	103	41.3 - 117
4-Bromofluorobenzene (4-BFB)	1.65	1.67	mg/Kg	1	2	82	84	35.5 - 129

¹MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

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Matrix Spike (MS-1) Spiked Sample: 241842

QC Batch: 72905
Prep Batch: 62501

Date Analyzed: 2010-08-24
QC Preparation: 2010-08-24

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	18.4	mg/Kg	1	20.0	<1.65	92	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	18.3	mg/Kg	1	20.0	<1.65	92	61.8 - 114	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.26	2.22	mg/Kg	1	2	113	111	50 - 162
4-Bromofluorobenzene (4-BFB)	1.78	1.72	mg/Kg	1	2	89	86	50 - 162

Standard (CCV-1)

QC Batch: 72816

Date Analyzed: 2010-08-20

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	250	100	80 - 120	2010-08-20

Standard (CCV-2)

QC Batch: 72816

Date Analyzed: 2010-08-20

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	268	107	80 - 120	2010-08-20

Standard (CCV-1)

QC Batch: 72886

Date Analyzed: 2010-08-23

Analyzed By: AG

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.106	106	80 - 120	2010-08-23
Toluene		mg/Kg	0.100	0.101	101	80 - 120	2010-08-23
Ethylbenzene		mg/Kg	0.100	0.0936	94	80 - 120	2010-08-23
Xylene		mg/Kg	0.300	0.281	94	80 - 120	2010-08-23

Standard (CCV-2)

QC Batch: 72886

Date Analyzed: 2010-08-23

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.112	112	80 - 120	2010-08-23
Toluene		mg/Kg	0.100	0.106	106	80 - 120	2010-08-23
Ethylbenzene		mg/Kg	0.100	0.0969	97	80 - 120	2010-08-23
Xylene		mg/Kg	0.300	0.288	96	80 - 120	2010-08-23

Standard (CCV-1)

QC Batch: 72887

Date Analyzed: 2010-08-23

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.963	96	80 - 120	2010-08-23

Standard (CCV-2)

QC Batch: 72887

Date Analyzed: 2010-08-23

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.882	88	80 - 120	2010-08-23

Standard (CCV-1)

QC Batch: 72904

Date Analyzed: 2010-08-24

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0988	99	80 - 120	2010-08-24
Toluene		mg/Kg	0.100	0.0947	95	80 - 120	2010-08-24
Ethylbenzene		mg/Kg	0.100	0.0870	87	80 - 120	2010-08-24
Xylene		mg/Kg	0.300	0.262	87	80 - 120	2010-08-24

Standard (CCV-2)

QC Batch: 72904

Date Analyzed: 2010-08-24

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.104	104	80 - 120	2010-08-24
Toluene		mg/Kg	0.100	0.0997	100	80 - 120	2010-08-24
Ethylbenzene		mg/Kg	0.100	0.0894	89	80 - 120	2010-08-24
Xylene		mg/Kg	0.300	0.265	88	80 - 120	2010-08-24

Standard (CCV-1)

QC Batch: 72905

Date Analyzed: 2010-08-24

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.947	95	80 - 120	2010-08-24

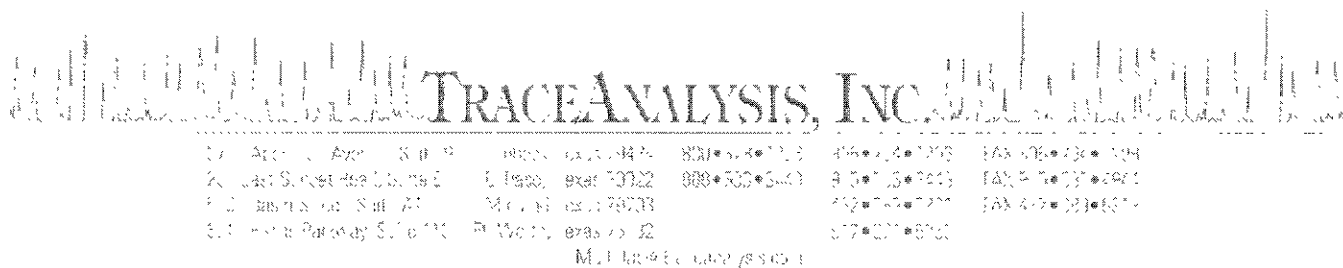
Standard (CCV-2)

QC Batch: 72905

Date Analyzed: 2010-08-24

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.890	89	80 - 120	2010-08-24



Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
 LELAP-02003
 Kansas E-10317

El Paso: T104704221-08-TX
 LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ron Rounsaville
 Nova Safety & Environmental
 2057 Commerce St.
 Midland, TX, 79703

Report Date: September 20, 2010

Work Order: 10091334



Project Location: South of Monument, NM
 Project Name: South Monument Gathering Sour
 Project Number: 2001-11193

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
244465	N Cent. Wall, 20'	soil	2010-09-10	14:40	2010-09-13
244466	E Wall-4, 20'	soil	2010-09-10	14:44	2010-09-13
244467	E Wall-5, 20'	soil	2010-09-10	14:48	2010-09-13
244468	E Wall-6, 20'	soil	2010-09-10	14:51	2010-09-13
244469	W Wall-4, 20'	soil	2010-09-10	14:58	2010-09-13
244470	W Wall-5, 20'	soil	2010-09-10	15:02	2010-09-13
244471	W Wall-6, 20'	soil	2010-09-10	15:05	2010-09-13

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.

This report consists of a total of 15 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink that reads "Michael Abel". The signature is written in a cursive, flowing style.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-09-13 and assigned to work order 10091334. Samples for work order 10091334 were received intact at a temperature of 3.3 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	63134	2010-09-16 at 12:00	73621	2010-09-16 at 20:46
TPH DRO - NEW	S 8015 D	63047	2010-09-14 at 11:48	73497	2010-09-14 at 11:48
TPH GRO	S 8015 D	63134	2010-09-16 at 12:00	73620	2010-09-16 at 21:14

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 10091334 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

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Analytical Report

Sample: 244465 - N Cent. Wall, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-14	Analyzed By:	kg
QC Batch:	73497	Sample Preparation:	2010-09-14	Prepared By:	kg
Prep Batch:	63047				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		97.7	mg/Kg	1	100	98	70 - 130

Sample: 244465 - N Cent. Wall, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-09-16	Analyzed By:	AG
QC Batch:	73620	Sample Preparation:	2010-09-16	Prepared By:	AG
Prep Batch:	63134				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.12	mg/Kg	1	2.00	106	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.93	mg/Kg	1	2.00	96	42 - 159

Sample: 244466 - E Wall-4, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-14	Analyzed By:	kg
QC Batch:	73497	Sample Preparation:	2010-09-14	Prepared By:	kg
Prep Batch:	63047				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		92.4	mg/Kg	1	100	92	70 - 130

Sample: 244466 - E Wall-4, 20'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 73620 Date Analyzed: 2010-09-16 Analyzed By: AG
Prep Batch: 63134 Sample Preparation: 2010-09-16 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.45	mg/Kg	1	2.00	122	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.38	mg/Kg	1	2.00	119	42 - 159

Sample: 244467 - E Wall-5, 20'

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 73621 Date Analyzed: 2010-09-16 Analyzed By: AG
Prep Batch: 63134 Sample Preparation: 2010-09-16 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.28	mg/Kg	1	2.00	114	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.58	mg/Kg	1	2.00	129	38.4 - 157

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Sample: 244467 - E Wall-5, 20'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73497
Prep Batch: 63047

Analytical Method: S 8015 D
Date Analyzed: 2010-09-14
Sample Preparation: 2010-09-14

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		98.7	mg/Kg	1	100	99	70 - 130

Sample: 244467 - E Wall-5, 20'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73620
Prep Batch: 63134

Analytical Method: S 8015 D
Date Analyzed: 2010-09-16
Sample Preparation: 2010-09-16

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.29	mg/Kg	1	2.00	114	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.37	mg/Kg	1	2.00	118	42 - 159

Sample: 244468 - E Wall-6, 20'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73497
Prep Batch: 63047

Analytical Method: S 8015 D
Date Analyzed: 2010-09-14
Sample Preparation: 2010-09-14

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		99.9	mg/Kg	1	100	100	70 - 130

Report Date: September 20, 2010
2001-11193

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Sample: 244468 - E Wall-6, 20'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73620
Prep Batch: 63134

Analytical Method: S 8015 D
Date Analyzed: 2010-09-16
Sample Preparation: 2010-09-16

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.51	mg/Kg	1	2.00	126	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.51	mg/Kg	1	2.00	126	42 - 159

Sample: 244469 - W Wall-4, 20'

Laboratory: Midland
Analysis: BTEX
QC Batch: 73621
Prep Batch: 63134

Analytical Method: S 8021B
Date Analyzed: 2010-09-16
Sample Preparation: 2010-09-16

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.62	mg/Kg	1	2.00	131	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.94	mg/Kg	1	2.00	147	38.4 - 157

Sample: 244469 - W Wall-4, 20'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73497
Prep Batch: 63047

Analytical Method: S 8015 D
Date Analyzed: 2010-09-14
Sample Preparation: 2010-09-14

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		99.3	mg/Kg	1	100	99	70 - 130

Sample: 244469 - W Wall-4, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-09-16	Analyzed By:	AG
QC Batch:	73620	Sample Preparation:	2010-09-16	Prepared By:	AG
Prep Batch:	63134				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.64	mg/Kg	1	2.00	132	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.68	mg/Kg	1	2.00	134	42 - 159

Sample: 244470 - W Wall-5, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-14	Analyzed By:	kg
QC Batch:	73497	Sample Preparation:	2010-09-14	Prepared By:	kg
Prep Batch:	63047				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		97.2	mg/Kg	1	100	97	70 - 130

Sample: 244470 - W Wall-5, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-09-16	Analyzed By:	AG
QC Batch:	73620	Sample Preparation:	2010-09-16	Prepared By:	AG
Prep Batch:	63134				

continued ...

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sample 244470 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
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Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.05	mg/Kg	1	2.00	102	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.08	mg/Kg	1	2.00	104	42 - 159

Sample: 244471 - W Wall-6, 20'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73497
Prep Batch: 63047

Analytical Method: S 8015 D
Date Analyzed: 2010-09-14
Sample Preparation: 2010-09-14

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		99.5	mg/Kg	1	100	100	70 - 130

Sample: 244471 - W Wall-6, 20'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73620
Prep Batch: 63134

Analytical Method: S 8015 D
Date Analyzed: 2010-09-16
Sample Preparation: 2010-09-16

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.42	mg/Kg	1	2.00	121	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.44	mg/Kg	1	2.00	122	42 - 159

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Method Blank (1) QC Batch: 73497

QC Batch: 73497 Date Analyzed: 2010-09-14 Analyzed By: kg
Prep Batch: 63047 QC Preparation: 2010-09-14 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.5	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		101	mg/Kg	1	100	101	70 - 130

Method Blank (1) QC Batch: 73620

QC Batch: 73620 Date Analyzed: 2010-09-16 Analyzed By: AG
Prep Batch: 63134 QC Preparation: 2010-09-16 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.10	mg/Kg	1	2.00	105	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.98	mg/Kg	1	2.00	99	52.4 - 130

Method Blank (1) QC Batch: 73621

QC Batch: 73621 Date Analyzed: 2010-09-16 Analyzed By: AG
Prep Batch: 63134 QC Preparation: 2010-09-16 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02
Toluene		<0.00950	mg/Kg	0.02
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.06	mg/Kg	1	2.00	103	66.6 - 122
4-Bromofluorobenzene (4-BFB)		2.13	mg/Kg	1	2.00	106	55.4 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 73497 Date Analyzed: 2010-09-14 Analyzed By: kg
Prep Batch: 63047 QC Preparation: 2010-09-14 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	235	mg/Kg	1	250	<14.5	94	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	224	mg/Kg	1	250	<14.5	90	57.4 - 133.4	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	115	115	mg/Kg	1	100	115	115	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 73620 Date Analyzed: 2010-09-16 Analyzed By: AG
Prep Batch: 63134 QC Preparation: 2010-09-16 Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	18.3	mg/Kg	1	20.0	<1.65	92	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	¹ 19.9	mg/Kg	1	20.0	<1.65	100	69.9 - 95.4	8	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.23	2.18	mg/Kg	1	2.00	112	109	61.9 - 142
4-Bromofluorobenzene (4-BFB)	2.21	2.34	mg/Kg	1	2.00	110	117	65.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 73621 Date Analyzed: 2010-09-16 Analyzed By: AG
Prep Batch: 63134 QC Preparation: 2010-09-16 Prepared By: AG

¹LCSD analyte out of range. LCS/LCSD has a RPD within limits. Therefore, LCS shows extraction occurred properly.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.12	mg/Kg	1	2.00	<0.0150	106	81.9 - 108
Toluene	2.09	mg/Kg	1	2.00	<0.00950	104	81.9 - 107
Ethylbenzene	2.08	mg/Kg	1	2.00	<0.0106	104	78.4 - 107
Xylene	6.27	mg/Kg	1	6.00	<0.00930	104	79.1 - 107

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.04	mg/Kg	1	2.00	<0.0150	102	81.9 - 108	4	20
Toluene	2.07	mg/Kg	1	2.00	<0.00950	104	81.9 - 107	1	20
Ethylbenzene	2.12	mg/Kg	1	2.00	<0.0106	106	78.4 - 107	2	20
Xylene	6.28	mg/Kg	1	6.00	<0.00930	105	79.1 - 107	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
Trifluorotoluene (TFT)	2.09	2.20	mg/Kg	1	2.00	104	110	70.2 - 114
4-Bromofluorobenzene (4-BFB)	2.41	2.39	mg/Kg	1	2.00	120	120	69.8 - 121

Matrix Spike (MS-1) Spiked Sample: 244471

QC Batch: 73497 Date Analyzed: 2010-09-14 Analyzed By: kg
Prep Batch: 63047 QC Preparation: 2010-09-14 Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	226	mg/Kg	1	250	16.9	84	35.2 - 167.1

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	223	mg/Kg	1	250	16.9	82	35.2 - 167.1	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	109	109	mg/Kg	1	100	109	109	70 - 130

Matrix Spike (MS-1) Spiked Sample: 244471

QC Batch: 73620 Date Analyzed: 2010-09-16 Analyzed By: AG
Prep Batch: 63134 QC Preparation: 2010-09-16 Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	22.4	mg/Kg	1	20.0	<1.65	112	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	22.6	mg/Kg	1	20.0	<1.65	113	61.8 - 114	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)	2.28	2.23	mg/Kg	1	2	114	112	50 - 162
4-Bromofluorobenzene (4-BFB)	2.43	2.49	mg/Kg	1	2	122	124	50 - 162

Matrix Spike (MS-1) Spiked Sample: 244760

QC Batch: 73621
Prep Batch: 63134

Date Analyzed: 2010-09-16
QC Preparation: 2010-09-16

Analyzed By: AG
Prepared By: AG

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	²	2.54	mg/Kg	1	2.00	<0.0150	127	80.5 - 112
Toluene	³	2.60	mg/Kg	1	2.00	<0.00950	130	82.4 - 113
Ethylbenzene	⁴	2.86	mg/Kg	1	2.00	<0.0106	143	83.9 - 114
Xylene	⁵	8.36	mg/Kg	1	6.00	<0.00930	139	84 - 114

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

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	⁶	2.55	mg/Kg	1	2.00	<0.0150	128	80.5 - 112	0	20
Toluene	⁷	2.64	mg/Kg	1	2.00	<0.00950	132	82.4 - 113	2	20
Ethylbenzene	⁸	2.88	mg/Kg	1	2.00	<0.0106	144	83.9 - 114	1	20
Xylene	⁹	8.57	mg/Kg	1	6.00	<0.00930	143	84 - 114	2	20

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

continued ...

²Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

³Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

⁴Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

⁵Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

⁶MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

⁷MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

⁸MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

⁹MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.91	2.32	mg/Kg	1	2	96	116	41.3 - 117
4-Bromofluorobenzene (4-BFB) ¹⁰	2.33	2.86	mg/Kg	1	2	116	143	35.5 - 129

Standard (CCV-1)

QC Batch: 73497			Date Analyzed: 2010-09-14			Analyzed By: kg		
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	
DRO		mg/Kg	250	228	91	80 - 120	2010-09-14	

Standard (CCV-2)

QC Batch: 73497			Date Analyzed: 2010-09-14			Analyzed By: kg		
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	
DRO		mg/Kg	250	229	92	80 - 120	2010-09-14	

Standard (CCV-3)

QC Batch: 73497			Date Analyzed: 2010-09-14			Analyzed By: kg		
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	
DRO		mg/Kg	250	224	90	80 - 120	2010-09-14	

Standard (CCV-1)

QC Batch: 73620			Date Analyzed: 2010-09-16			Analyzed By: AG		
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	
GRO		mg/Kg	1.00	1.13	113	80 - 120	2010-09-16	

¹⁰High surrogate recovery due to peak interference.

Standard (CCV-2)

QC Batch: 73620

Date Analyzed: 2010-09-16

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.05	105	80 - 120	2010-09-16

Standard (CCV-1)

QC Batch: 73621

Date Analyzed: 2010-09-16

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.109	109	80 - 120	2010-09-16
Toluene		mg/Kg	0.100	0.109	109	80 - 120	2010-09-16
Ethylbenzene		mg/Kg	0.100	0.109	109	80 - 120	2010-09-16
Xylene		mg/Kg	0.300	0.329	110	80 - 120	2010-09-16

Standard (CCV-2)

QC Batch: 73621

Date Analyzed: 2010-09-16

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.108	108	80 - 120	2010-09-16
Toluene		mg/Kg	0.100	0.107	107	80 - 120	2010-09-16
Ethylbenzene		mg/Kg	0.100	0.109	109	80 - 120	2010-09-16
Xylene		mg/Kg	0.300	0.323	108	80 - 120	2010-09-16

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 Invoice to:
 (If different from above) **Plains**
 Project #: **SRS: 2001-11193**
 Project Name: **S-MONT. GATH. SOUR**
 Project Location (including state): **Lea Co. NM**
 Sampler Signature: *[Signature]*

[illegible]

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST OBS COR
		9/13/10	11:35		Trace	9/13/10	11:35	
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

ANALYSIS REQUEST (Circle or Specify Method No.)		Hold	Turn Around Time if different from standard
MTBE 8021 / 602 / 8260 / 624			
BTEX 8021 / 602 / 8260 / 624	X		
TPH 418.1 / TX1005 / TX1005 Ext(C35)			
TPH 8015 GRO / DRO / TVHC	X		
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, F1, S04, NO3, NO2, Alkalinity			
Na, Ca, Mg, K, TDS, EC			

3.3	LAB USE ONLY	REMARKS: All tests - Midland
	Inhal ☒ / N	
	Headspace <u>Y</u> / N (NA)	☐ Dry Weight Basis Required
		☐ TRRP Report Required
		☐ Check if Special Reporting Limits Are Needed
	Log-In-Review	

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A handwritten signature in black ink that reads "Michael Abel". The signature is written in a cursive, flowing style.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-09-17 and assigned to work order 10091704. Samples for work order 10091704 were received intact at a temperature of 7.5 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	63320	2010-09-23 at 10:45	73881	2010-09-24 at 17:08
TPH DRO - NEW	S 8015 D	63150	2010-09-17 at 11:25	73617	2010-09-17 at 11:25
TPH GRO	S 8015 D	63320	2010-09-23 at 10:45	73827	2010-09-24 at 17:36

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 10091704 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: 244983 - SFP, S Wall-1, 12'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-17	Analyzed By:	kg
QC Batch:	73617	Sample Preparation:	2010-09-17	Prepared By:	kg
Prep Batch:	63150				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		108	mg/Kg	1	100	108	70 - 130

Sample: 244983 - SFP, S Wall-1, 12'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-09-24	Analyzed By:	AG
QC Batch:	73827	Sample Preparation:	2010-09-23	Prepared By:	AG
Prep Batch:	63320				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.20	mg/Kg	1	2.00	110	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.61	mg/Kg	1	2.00	80	42 - 159

Sample: 244984 - SFP, E Wall-1, 10'

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2010-09-24	Analyzed By:	AG
QC Batch:	73881	Sample Preparation:	2010-09-23	Prepared By:	AG
Prep Batch:	63320				

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200

continued ...

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South Monument Gathering Sour

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sample 244984 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.98	mg/Kg	1	2.00	99	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.43	mg/Kg	1	2.00	72	38.4 - 157

Sample: 244984 - SFP, E Wall-1, 10'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 73617

Prep Batch: 63150

Analytical Method: S 8015 D

Date Analyzed: 2010-09-17

Sample Preparation: 2010-09-17

Prep Method: N/A

Analyzed By: kg

Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		109	mg/Kg	1	100	109	70 - 130

Sample: 244984 - SFP, E Wall-1, 10'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 73827

Prep Batch: 63320

Analytical Method: S 8015 D

Date Analyzed: 2010-09-24

Sample Preparation: 2010-09-23

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.98	mg/Kg	1	2.00	99	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.40	mg/Kg	1	2.00	70	42 - 159

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Sample: 244985 - SFP, W Wall-1, 12'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	73617	Date Analyzed:	2010-09-17
Prep Batch:	63150	Sample Preparation:	2010-09-17
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		104	mg/Kg	1	100	104	70 - 130

Sample: 244985 - SFP, W Wall-1, 12'

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	73827	Date Analyzed:	2010-09-24
Prep Batch:	63320	Sample Preparation:	2010-09-23
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.52	mg/Kg	1	2.00	76	42 - 159

Sample: 244986 - SFP, S Floor-1, 15'

Laboratory:	Midland		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	73881	Date Analyzed:	2010-09-24
Prep Batch:	63320	Sample Preparation:	2010-09-23
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.16	mg/Kg	1	2.00	108	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.54	mg/Kg	1	2.00	77	38.4 - 157

Sample: 244986 - SFP, S Floor-1, 15'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 73617 Date Analyzed: 2010-09-17 Analyzed By: kg
Prep Batch: 63150 Sample Preparation: 2010-09-17 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		107	mg/Kg	1	100	107	70 - 130

Sample: 244986 - SFP, S Floor-1, 15'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 73827 Date Analyzed: 2010-09-24 Analyzed By: AG
Prep Batch: 63320 Sample Preparation: 2010-09-23 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.14	mg/Kg	1	2.00	107	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.51	mg/Kg	1	2.00	76	42 - 159

Sample: 244987 - SFP, S Floor-2, 12'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 73617 Date Analyzed: 2010-09-17 Analyzed By: kg
Prep Batch: 63150 Sample Preparation: 2010-09-17 Prepared By: kg

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Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		111	mg/Kg	1	100	111	70 - 130

Sample: 244987 - SFP, S Floor-2, 12'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	73827	Date Analyzed:	2010-09-24	Analyzed By:	AG
Prep Batch:	63320	Sample Preparation:	2010-09-23	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.97	mg/Kg	1	2.00	98	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.39	mg/Kg	1	2.00	70	42 - 159

Sample: 244988 - SFP, E Wall-2, 9'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	73617	Date Analyzed:	2010-09-17	Analyzed By:	kg
Prep Batch:	63150	Sample Preparation:	2010-09-17	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		103	mg/Kg	1	100	103	70 - 130

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Sample: 244988 - SFP, E Wall-2, 9'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73827
Prep Batch: 63320

Analytical Method: S 8015 D
Date Analyzed: 2010-09-24
Sample Preparation: 2010-09-23

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.11	mg/Kg	1	2.00	106	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.48	mg/Kg	1	2.00	74	42 - 159

Sample: 244989 - SFP, W Wall-2, 8'

Laboratory: Midland
Analysis: BTEX
QC Batch: 73881
Prep Batch: 63320

Analytical Method: S 8021B
Date Analyzed: 2010-09-24
Sample Preparation: 2010-09-23

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.08	mg/Kg	1	2.00	104	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.50	mg/Kg	1	2.00	75	38.4 - 157

Sample: 244989 - SFP, W Wall-2, 8'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73617
Prep Batch: 63150

Analytical Method: S 8015 D
Date Analyzed: 2010-09-17
Sample Preparation: 2010-09-17

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		111	mg/Kg	1	100	111	70 - 130

Sample: 244989 - SFP, W Wall-2, 8'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 73827 Date Analyzed: 2010-09-24 Analyzed By: AG
Prep Batch: 63320 Sample Preparation: 2010-09-23 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.10	mg/Kg	1	2.00	105	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.46	mg/Kg	1	2.00	73	42 - 159

Method Blank (1) QC Batch: 73617

QC Batch: 73617 Date Analyzed: 2010-09-17 Analyzed By: kg
Prep Batch: 63150 QC Preparation: 2010-09-17 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.5	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		106	mg/Kg	1	100	106	70 - 130

Method Blank (1) QC Batch: 73827

QC Batch: 73827 Date Analyzed: 2010-09-24 Analyzed By: AG
Prep Batch: 63320 QC Preparation: 2010-09-23 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.96	mg/Kg	1	2.00	98	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.43	mg/Kg	1	2.00	72	52.4 - 130

Method Blank (1) QC Batch: 73881

QC Batch: 73881 Date Analyzed: 2010-09-24 Analyzed By: AG
Prep Batch: 63320 QC Preparation: 2010-09-23 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02
Toluene		<0.00950	mg/Kg	0.02
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.93	mg/Kg	1	2.00	96	66.6 - 122
4-Bromofluorobenzene (4-BFB)		1.46	mg/Kg	1	2.00	73	55.4 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 73617 Date Analyzed: 2010-09-17 Analyzed By: kg
Prep Batch: 63150 QC Preparation: 2010-09-17 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	258	mg/Kg	1	250	<14.5	103	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	265	mg/Kg	1	250	<14.5	106	57.4 - 133.4	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
n-Tricosane	113	114	mg/Kg	1	100	113	114	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 73827
Prep Batch: 63320

Date Analyzed: 2010-09-24
QC Preparation: 2010-09-23

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.7	mg/Kg	1	20.0	<1.65	74	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	14.7	mg/Kg	1	20.0	<1.65	74	69.9 - 95.4	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
Trifluorotoluene (TFT)	1.93	1.92	mg/Kg	1	2.00	96	96	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.46	1.44	mg/Kg	1	2.00	73	72	65.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 73881
Prep Batch: 63320

Date Analyzed: 2010-09-24
QC Preparation: 2010-09-23

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.98	mg/Kg	1	2.00	<0.0150	99	81.9 - 108
Toluene	1.99	mg/Kg	1	2.00	<0.00950	100	81.9 - 107
Ethylbenzene	2.00	mg/Kg	1	2.00	<0.0106	100	78.4 - 107
Xylene	5.86	mg/Kg	1	6.00	<0.00930	98	79.1 - 107

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.92	mg/Kg	1	2.00	<0.0150	96	81.9 - 108	3	20
Toluene	1.94	mg/Kg	1	2.00	<0.00950	97	81.9 - 107	2	20
Ethylbenzene	1.95	mg/Kg	1	2.00	<0.0106	98	78.4 - 107	2	20
Xylene	5.71	mg/Kg	1	6.00	<0.00930	95	79.1 - 107	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.05	1.99	mg/Kg	1	2.00	102	100	70.2 - 114
4-Bromofluorobenzene (4-BFB)	1.63	1.55	mg/Kg	1	2.00	82	78	69.8 - 121

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Matrix Spike (MS-1) Spiked Sample: 244989

QC Batch: 73617 Date Analyzed: 2010-09-17 Analyzed By: kg
Prep Batch: 63150 QC Preparation: 2010-09-17 Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	280	mg/Kg	1	250	38.3	97	35.2 - 167.1

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	271	mg/Kg	1	250	38.3	93	35.2 - 167.1	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	107	105	mg/Kg	1	100	107	105	70 - 130

Matrix Spike (MS-1) Spiked Sample: 245188

QC Batch: 73827 Date Analyzed: 2010-09-24 Analyzed By: AG
Prep Batch: 63320 QC Preparation: 2010-09-23 Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.2	mg/Kg	1	20.0	<1.65	86	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	17.6	mg/Kg	1	20.0	<1.65	88	61.8 - 114	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)	2.24	2.16	mg/Kg	1	2	112	108	50 - 162
4-Bromofluorobenzene (4-BFB)	1.67	1.62	mg/Kg	1	2	84	81	50 - 162

Matrix Spike (MS-1) Spiked Sample: 245187

QC Batch: 73881 Date Analyzed: 2010-09-24 Analyzed By: AG
Prep Batch: 63320 QC Preparation: 2010-09-23 Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.10	mg/Kg	1	2.00	<0.0150	105	80.5 - 112
Toluene	2.13	mg/Kg	1	2.00	<0.00950	106	82.4 - 113
Ethylbenzene	2.20	mg/Kg	1	2.00	<0.0106	110	83.9 - 114
Xylene	6.42	mg/Kg	1	6.00	<0.00930	107	84 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.98	mg/Kg	1	2.00	<0.0150	99	80.5 - 112	6	20
Toluene	2.02	mg/Kg	1	2.00	<0.00950	101	82.4 - 113	5	20
Ethylbenzene	2.08	mg/Kg	1	2.00	<0.0106	104	83.9 - 114	6	20
Xylene	6.06	mg/Kg	1	6.00	<0.00930	101	84 - 114	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)	2.15	2.04	mg/Kg	1	2	108	102	41.3 - 117
4-Bromofluorobenzene (4-BFB)	1.67	1.52	mg/Kg	1	2	84	76	35.5 - 129

Standard (CCV-2)

QC Batch: 73617

Date Analyzed: 2010-09-17

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	287	115	80 - 120	2010-09-17

Standard (CCV-3)

QC Batch: 73617

Date Analyzed: 2010-09-17

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	282	113	80 - 120	2010-09-17

Standard (CCV-4)

QC Batch: 73617

Date Analyzed: 2010-09-17

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	240	96	80 - 120	2010-09-17

Standard (CCV-1)

QC Batch: 73827 Date Analyzed: 2010-09-24 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.05	105	80 - 120	2010-09-24

Standard (CCV-2)

QC Batch: 73827 Date Analyzed: 2010-09-24 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.01	101	80 - 120	2010-09-24

Standard (CCV-1)

QC Batch: 73881 Date Analyzed: 2010-09-24 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.105	105	80 - 120	2010-09-24
Toluene		mg/Kg	0.100	0.105	105	80 - 120	2010-09-24
Ethylbenzene		mg/Kg	0.100	0.104	104	80 - 120	2010-09-24
Xylene		mg/Kg	0.300	0.313	104	80 - 120	2010-09-24

Standard (CCV-2)

QC Batch: 73881 Date Analyzed: 2010-09-24 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0921	92	80 - 120	2010-09-24
Toluene		mg/Kg	0.100	0.0921	92	80 - 120	2010-09-24
Ethylbenzene		mg/Kg	0.100	0.0921	92	80 - 120	2010-09-24

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standard continued . . .

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Xylene		mg/Kg	0.300	0.268	89	80 - 120	2010-09-24

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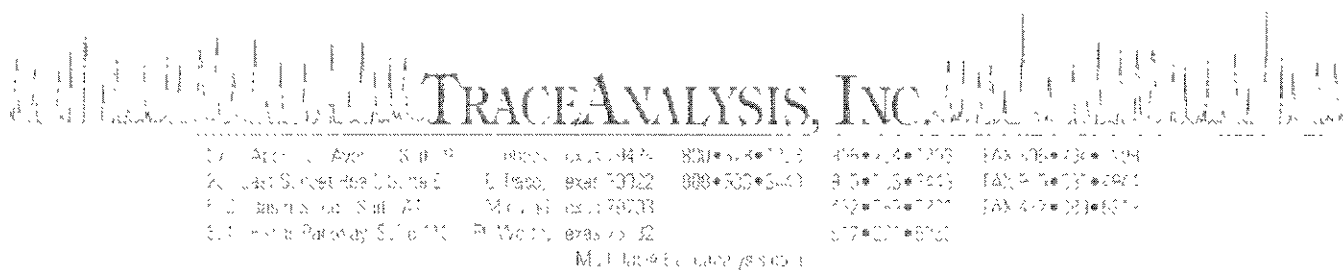
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST OBS COR
<i>David Randall</i>		9/17/10	0843	<i>Matt Green</i>	Nola	9-17-10	08:43	INST OBS COR
<i>Matt Green</i>	Nola	9-17-10	0848	<i>John Trace</i>		9/10	8:48	INST OBS COR

ANALYSIS REQUEST (Circle or Specify Method No.)		LAB USE ONLY		REMARKS:
MTBE 8021 / 602 / 8260 / 624				all tests - Midland Dry Weight Basis Required ☐ TRRP Report Required ☐ Check if Special Reporting Limits Are Needed ☐
BTEX 8021 602 / 8260 / 624	X			
TPH 418.1 / TX1005 / TX1005 Ext(C35)				
TPH 8015 GRO / DRO / TVHC	X			
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				Turn Around Time if different from standard Hold
GC/MS Vol. 8260 / 624				
GC/MS Semt. Vol. 8270 / 625				
PCB's 8082 / 608				
Pesticides 8081 / 608				
BOD, TSS, pH				
Moisture Content				
Cl, Fl, SO4, NO3, NO2, Alkalinity				
Na, Ca, Mg, K, TDS, EC				

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

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Carrier #



Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: September 30, 2010

Work Order: 10092229



Project Location: South of Monument, NM
Project Name: South Monument Gathering Sour
Project Number: 2001-11193

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
245438	SFP, W Wall-3, 8'	soil	2010-09-21	14:00	2010-09-22
245439	SFP, S Floor-3, 10'	soil	2010-09-21	14:04	2010-09-22
245440	SFP, E Wall-3, 8'	soil	2010-09-21	14:08	2010-09-22
245441	SFP, S Floor-4, 10'	soil	2010-09-21	14:12	2010-09-22
245442	SFP, E Wall-4, 8'	soil	2010-09-21	14:15	2010-09-22
245443	SFP, W Wall-4, 9'	soil	2010-09-21	14:19	2010-09-22
245444	SFP, E Wall-5, 8'	soil	2010-09-21	14:22	2010-09-22
245445	SFP, S Floor-5, 10'	soil	2010-09-21	14:25	2010-09-22
245446	SFP, W Wall-5, 8'	soil	2010-09-21	14:28	2010-09-22

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.

This report consists of a total of 15 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink that reads "Michael Abel". The signature is fluid and cursive, with the first and last names being clearly legible.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-09-22 and assigned to work order 10092229. Samples for work order 10092229 were received intact at a temperature of 3.2 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	63364	2010-09-24 at 09:40	73844	2010-09-24 at 09:40
TPH GRO	S 8015 D	63331	2010-09-24 at 16:00	73937	2010-09-28 at 11:48
TPH GRO	S 8015 D	63453	2010-09-29 at 09:00	73975	2010-09-29 at 11:25

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 10092229 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: 245438 - SFP, W Wall-3, 8'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-24	Analyzed By:	kg
QC Batch:	73844	Sample Preparation:	2010-09-24	Prepared By:	kg
Prep Batch:	63364				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		80.7	mg/Kg	1	100	81	70 - 130

Sample: 245438 - SFP, W Wall-3, 8'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-09-29	Analyzed By:	AG
QC Batch:	73975	Sample Preparation:	2010-09-29	Prepared By:	AG
Prep Batch:	63453				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.08	mg/Kg	1	2.00	104	83.4 - 122
4-Bromofluorobenzene (4-BFB)		1.89	mg/Kg	1	2.00	94	50 - 138

Sample: 245439 - SFP, S Floor-3, 10'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-24	Analyzed By:	kg
QC Batch:	73844	Sample Preparation:	2010-09-24	Prepared By:	kg
Prep Batch:	63364				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		87.7	mg/Kg	1	100	88	70 - 130

Sample: 245439 - SFP, S Floor-3, 10'

Laboratory:	Midland						
Analysis:	TPH GRO	Analytical Method:	S 8015 D		Prep Method:	S 5035	
QC Batch:	73975	Date Analyzed:	2010-09-29		Analyzed By:	AG	
Prep Batch:	63453	Sample Preparation:	2010-09-29		Prepared By:	AG	

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.09	mg/Kg	1	2.00	104	83.4 - 122
4-Bromofluorobenzene (4-BFB)		1.91	mg/Kg	1	2.00	96	50 - 138

Sample: 245440 - SFP, E Wall-3, 8'

Laboratory:	Midland						
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D		Prep Method:	N/A	
QC Batch:	73844	Date Analyzed:	2010-09-24		Analyzed By:	kg	
Prep Batch:	63364	Sample Preparation:	2010-09-24		Prepared By:	kg	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		83.8	mg/Kg	1	100	84	70 - 130

Sample: 245440 - SFP, E Wall-3, 8'

Laboratory:	Midland						
Analysis:	TPH GRO	Analytical Method:	S 8015 D		Prep Method:	S 5035	
QC Batch:	73975	Date Analyzed:	2010-09-29		Analyzed By:	AG	
Prep Batch:	63453	Sample Preparation:	2010-09-29		Prepared By:	AG	

continued ...

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sample 245440 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
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Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.13	mg/Kg	1	2.00	106	83.4 - 122
4-Bromofluorobenzene (4-BFB)		1.94	mg/Kg	1	2.00	97	50 - 138

Sample: 245441 - SFP, S Floor-4, 10'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 73844 Date Analyzed: 2010-09-24 Analyzed By: kg
Prep Batch: 63364 Sample Preparation: 2010-09-24 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		84.8	mg/Kg	1	100	85	70 - 130

Sample: 245441 - SFP, S Floor-4, 10'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 73975 Date Analyzed: 2010-09-29 Analyzed By: AG
Prep Batch: 63453 Sample Preparation: 2010-09-29 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.22	mg/Kg	1	2.00	111	83.4 - 122
4-Bromofluorobenzene (4-BFB)		2.02	mg/Kg	1	2.00	101	50 - 138

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Sample: 245442 - SFP, E Wall-4, 8'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	73844	Date Analyzed:	2010-09-24
Prep Batch:	63364	Sample Preparation:	2010-09-24
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		87.4	mg/Kg	1	100	87	70 - 130

Sample: 245442 - SFP, E Wall-4, 8'

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	73975	Date Analyzed:	2010-09-29
Prep Batch:	63453	Sample Preparation:	2010-09-29
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	83.4 - 122
4-Bromofluorobenzene (4-BFB)		1.99	mg/Kg	1	2.00	100	50 - 138

Sample: 245443 - SFP, W Wall-4, 9'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	73844	Date Analyzed:	2010-09-24
Prep Batch:	63364	Sample Preparation:	2010-09-24
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		82.1	mg/Kg	1	100	82	70 - 130

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Sample: 245443 - SFP, W Wall-4, 9'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73975
Prep Batch: 63453

Analytical Method: S 8015 D
Date Analyzed: 2010-09-29
Sample Preparation: 2010-09-29

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.15	mg/Kg	1	2.00	108	83.4 - 122
4-Bromofluorobenzene (4-BFB)		1.95	mg/Kg	1	2.00	98	50 - 138

Sample: 245444 - SFP, E Wall-5, 8'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73844
Prep Batch: 63364

Analytical Method: S 8015 D
Date Analyzed: 2010-09-24
Sample Preparation: 2010-09-24

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		83.1	mg/Kg	1	100	83	70 - 130

Sample: 245444 - SFP, E Wall-5, 8'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73937
Prep Batch: 63331

Analytical Method: S 8015 D
Date Analyzed: 2010-09-28
Sample Preparation: 2010-09-24

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.27	mg/Kg	1	2.00	114	83.4 - 122

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sample continued ...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		2.10	mg/Kg	1	2.00	105	50 - 138

Sample: 245445 - SFP, S Floor-5, 10'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 73844 Date Analyzed: 2010-09-24 Analyzed By: kg
Prep Batch: 63364 Sample Preparation: 2010-09-24 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		79.3	mg/Kg	1	100	79	70 - 130

Sample: 245445 - SFP, S Floor-5, 10'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 73937 Date Analyzed: 2010-09-28 Analyzed By: AG
Prep Batch: 63331 Sample Preparation: 2010-09-24 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.12	mg/Kg	1	2.00	106	83.4 - 122
4-Bromofluorobenzene (4-BFB)		1.94	mg/Kg	1	2.00	97	50 - 138

Sample: 245446 - SFP, W Wall-5, 8'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 73844 Date Analyzed: 2010-09-24 Analyzed By: kg
Prep Batch: 63364 Sample Preparation: 2010-09-24 Prepared By: kg

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Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		79.2	mg/Kg	1	100	79	70 - 130

Sample: 245446 - SFP, W Wall-5, 8'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73937
Prep Batch: 63331

Analytical Method: S 8015 D
Date Analyzed: 2010-09-28
Sample Preparation: 2010-09-24

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.18	mg/Kg	1	2.00	109	83.4 - 122
4-Bromofluorobenzene (4-BFB)		1.99	mg/Kg	1	2.00	100	50 - 138

Method Blank (1) QC Batch: 73844

QC Batch: 73844
Prep Batch: 63364

Date Analyzed: 2010-09-24
QC Preparation: 2010-09-24

Analyzed By: kg
Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		77.6	mg/Kg	1	100	78	70 - 130

Method Blank (1) QC Batch: 73937

QC Batch: 73937
Prep Batch: 63331

Date Analyzed: 2010-09-28
QC Preparation: 2010-09-24

Analyzed By: AG
Prepared By: AG

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Parameter	Flag	MDL Result	Units	RL
GRO		<0.482	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.17	mg/Kg	1	2.00	108	86.9 - 115
4-Bromofluorobenzene (4-BFB)		1.95	mg/Kg	1	2.00	98	45.8 - 147

Method Blank (1) QC Batch: 73975

QC Batch: 73975 Date Analyzed: 2010-09-29 Analyzed By: AG
Prep Batch: 63453 QC Preparation: 2010-09-29 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.482	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.17	mg/Kg	1	2.00	108	86.9 - 115
4-Bromofluorobenzene (4-BFB)		1.95	mg/Kg	1	2.00	98	45.8 - 147

Laboratory Control Spike (LCS-1)

QC Batch: 73844 Date Analyzed: 2010-09-24 Analyzed By: kg
Prep Batch: 63364 QC Preparation: 2010-09-24 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	204	mg/Kg	1	250	<14.6	82	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	222	mg/Kg	1	250	<14.6	89	47.5 - 144.1	8	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	106	102	mg/Kg	1	100	106	102	70 - 130

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Laboratory Control Spike (LCS-1)

QC Batch: 73937
Prep Batch: 63331

Date Analyzed: 2010-09-28
QC Preparation: 2010-09-24

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.6	mg/Kg	1	20.0	<0.482	83	56.5 - 98.2

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	17.7	mg/Kg	1	20.0	<0.482	88	56.5 - 98.2	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)	2.21	2.28	mg/Kg	1	2.00	110	114	86.5 - 118
4-Bromofluorobenzene (4-BFB)	2.01	2.08	mg/Kg	1	2.00	100	104	51.1 - 150

Laboratory Control Spike (LCS-1)

QC Batch: 73975
Prep Batch: 63453

Date Analyzed: 2010-09-29
QC Preparation: 2010-09-29

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.2	mg/Kg	1	20.0	<0.482	81	56.5 - 98.2

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	17.4	mg/Kg	1	20.0	<0.482	87	56.5 - 98.2	7	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.18	2.31	mg/Kg	1	2.00	109	116	86.5 - 118
4-Bromofluorobenzene (4-BFB)	2.00	2.13	mg/Kg	1	2.00	100	106	51.1 - 150

Matrix Spike (MS-1) Spiked Sample: 245725

QC Batch: 73844
Prep Batch: 63364

Date Analyzed: 2010-09-24
QC Preparation: 2010-09-24

Analyzed By: kg
Prepared By: kg

Report Date: September 30, 2010
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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	273	mg/Kg	1	250	18.8	102	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	292	mg/Kg	1	250	18.8	109	11.7 - 152.3	7	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	111	108	mg/Kg	1	100	111	108	70 - 130

Matrix Spike (MS-1) Spiked Sample: 245725

QC Batch: 73937
Prep Batch: 63331

Date Analyzed: 2010-09-28
QC Preparation: 2010-09-24

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	13.6	mg/Kg	1	20.0	<0.482	68	50 - 150

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	¹ 18.2	mg/Kg	1	20.0	<0.482	91	50 - 150	29	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.01	1.94	mg/Kg	1	2	100	97	81.6 - 117
4-Bromofluorobenzene (4-BFB)	1.94	1.92	mg/Kg	1	2	97	96	50 - 170

Matrix Spike (MS-1) Spiked Sample: 245441

QC Batch: 73975
Prep Batch: 63453

Date Analyzed: 2010-09-29
QC Preparation: 2010-09-29

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.4	mg/Kg	1	20.0	<0.482	77	50 - 150

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

¹MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

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South Monument Gathering Sour

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South of Monument, NM

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.0	mg/Kg	1	20.0	<0.482	80	50 - 150	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)	2.19	2.14	mg/Kg	1	2	110	107	81.6 - 117
4-Bromofluorobenzene (4-BFB)	2.11	2.07	mg/Kg	1	2	106	104	50 - 170

Standard (CCV-1)

QC Batch: 73844

Date Analyzed: 2010-09-24

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	224	90	80 - 120	2010-09-24

Standard (CCV-2)

QC Batch: 73844

Date Analyzed: 2010-09-24

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	220	88	80 - 120	2010-09-24

Standard (CCV-3)

QC Batch: 73844

Date Analyzed: 2010-09-24

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	200	80	80 - 120	2010-09-24

Standard (CCV-1)

QC Batch: 73937

Date Analyzed: 2010-09-28

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.05	105	80 - 120	2010-09-28

Standard (CCV-2)

QC Batch: 73937

Date Analyzed: 2010-09-28

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.04	104	80 - 120	2010-09-28

Standard (CCV-1)

QC Batch: 73975

Date Analyzed: 2010-09-29

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.03	103	80 - 120	2010-09-29

Standard (CCV-2)

QC Batch: 73975

Date Analyzed: 2010-09-29

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.01	101	80 - 120	2010-09-29

Standard (CCV-3)

QC Batch: 73975

Date Analyzed: 2010-09-29

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.02	102	80 - 120	2010-09-29

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Company Name: NOVA		Phone #:											
Address: (Street, City, Zip)		Fax #:											
Contact Person: Ron Rounsaville		E-mail:											
Invoice to: (if different from above)													
Project #: SRS # 2001-11193		Project Name: S. Mont. Geoth. Sour											
Project Location (including state): Lea Co. NM		Sampler Signature: <i>[Signature]</i>											
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
246438	SFP, W. Wall-3, 8'	1	4oz	X								9/21/00	1400
439	SFP, S. Floor-3, 10'	1		X									1404
440	SFP, E. Wall-3, 8'	1		X									1408
441	SFP, S. Floor-4, 10'	1		X									1412
442	SFP, E. Wall-4, 8'	1		X									1415
443	SFP, W. Wall-4, 9'	1		X									1419
444	SFP, W. Wall-5, 8'	1		X									1422
445	SFP, S. Floor-5, 10'	1		X									1425
446	SFP, W. Wall-5, 8'	1		X									1428
Turn Around Time if different from standard													

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 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	PCBs 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F1, SO4, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC	Hold
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LAB USE ONLY

REMARKS: **All tests Midland**

Relinquished by: <i>[Signature]</i>	Company: Trace	Date: 9/22/00	Time: 13:55	Received by: <i>[Signature]</i>	Company: Trace	Date: 9/22/00	Time: 13:55	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

Dry Weight Basis Required ☐
TRRP Report Required ☐
Check if Special Reporting Limits Are Needed ☐

Carrier # *[Signature]*

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
246674	MFP, FLR-7, 20'	soil	2010-10-05	10:39	2010-10-05
246675	MFP, E Wall-7, 18'	soil	2010-10-05	10:42	2010-10-05
246676	SP-1	soil	2010-10-05	11:10	2010-10-05

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.

This report consists of a total of 26 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-10-05 and assigned to work order 10100520. Samples for work order 10100520 were received intact at a temperature of 14.1 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	63572	2010-10-05 at 11:00	74117	2010-10-05 at 23:20
BTEX	S 8021B	63670	2010-10-07 at 14:24	74209	2010-10-07 at 14:24
TPH DRO - NEW	S 8015 D	63611	2010-10-05 at 11:09	74125	2010-10-05 at 11:09
TPH DRO - NEW	S 8015 D	63692	2010-10-07 at 10:42	74234	2010-10-07 at 10:42
TPH GRO	S 8015 D	63572	2010-10-05 at 11:00	74118	2010-10-05 at 23:46
TPH GRO	S 8015 D	63670	2010-10-07 at 14:24	74210	2010-10-07 at 14:24

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 10100520 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: 246664 - MFP, W Wall-6, 3'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-10-07	Analyzed By:	kg
QC Batch:	74234	Sample Preparation:	2010-10-07	Prepared By:	kg
Prep Batch:	63692				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		62.9	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		94.5	mg/Kg	1	100	94	70 - 130

Sample: 246664 - MFP, W Wall-6, 3'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-10-07	Analyzed By:	ER
QC Batch:	74210	Sample Preparation:	2010-10-07	Prepared By:	ER
Prep Batch:	63670				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	¹	<4.00	mg/Kg	2	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	²	1.45	mg/Kg	2	2.00	72	85.2 - 112
4-Bromofluorobenzene (4-BFB)		2.12	mg/Kg	2	2.00	106	68.4 - 112

Sample: 246665 - MFP, FLR-6, 4'

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2010-10-07	Analyzed By:	ER
QC Batch:	74209	Sample Preparation:	2010-10-07	Prepared By:	ER
Prep Batch:	63670				

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200

¹Sample dilution necessitated due to the presence of surfactants in sample.

²Surrogate recovery out due to dilution caused by surfactants in the sample.

continued ...

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sample 246665 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Xylene		0.0217	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.64	mg/Kg	1	2.00	82	71.6 - 116
4-Bromofluorobenzene (4-BFB)		1.77	mg/Kg	1	2.00	88	71.8 - 115

Sample: 246665 - MFP, FLR-6, 4'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 74234 Date Analyzed: 2010-10-07 Analyzed By: kg
Prep Batch: 63692 Sample Preparation: 2010-10-07 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		73.9	mg/Kg	1	100	74	70 - 130

Sample: 246665 - MFP, FLR-6, 4'

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 74210 Date Analyzed: 2010-10-07 Analyzed By: ER
Prep Batch: 63670 Sample Preparation: 2010-10-07 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.76	mg/Kg	1	2.00	88	85.2 - 112
4-Bromofluorobenzene (4-BFB)		1.73	mg/Kg	1	2.00	86	68.4 - 112

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Sample: 246666 - MFP, E Wall-6, 3'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	74234	Date Analyzed:	2010-10-07
Prep Batch:	63692	Sample Preparation:	2010-10-07
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		70.8	mg/Kg	1	100	71	70 - 130

Sample: 246666 - MFP, E Wall-6, 3'

Laboratory:	Lubbock		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	74210	Date Analyzed:	2010-10-07
Prep Batch:	63670	Sample Preparation:	2010-10-07
		Prep Method:	S 5035
		Analyzed By:	ER
		Prepared By:	ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	³	1.64	mg/Kg	1	2.00	82	85.2 - 112
4-Bromofluorobenzene (4-BFB)		1.78	mg/Kg	1	2.00	89	68.4 - 112

Sample: 246667 - MFP, W Wall-8, 12'

Laboratory:	Lubbock		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	74209	Date Analyzed:	2010-10-07
Prep Batch:	63670	Sample Preparation:	2010-10-07
		Prep Method:	S 5035
		Analyzed By:	ER
		Prepared By:	ER

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

³Low surrogate recovery. Sample non-detect, result bias low.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.74	mg/Kg	1	2.00	87	71.6 - 116
4-Bromofluorobenzene (4-BFB)		2.08	mg/Kg	1	2.00	104	71.8 - 115

Sample: 246667 - MFP, W Wall-8, 12'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 74234 Date Analyzed: 2010-10-07 Analyzed By: kg
Prep Batch: 63692 Sample Preparation: 2010-10-07 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		72.5	mg/Kg	1	100	72	70 - 130

Sample: 246667 - MFP, W Wall-8, 12'

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 74210 Date Analyzed: 2010-10-07 Analyzed By: ER
Prep Batch: 63670 Sample Preparation: 2010-10-07 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.87	mg/Kg	1	2.00	94	85.2 - 112
4-Bromofluorobenzene (4-BFB)		2.03	mg/Kg	1	2.00	102	68.4 - 112

Sample: 246668 - MFP, FLR-8, 14'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 74234 Date Analyzed: 2010-10-07 Analyzed By: kg
Prep Batch: 63692 Sample Preparation: 2010-10-07 Prepared By: kg

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Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		73.2	mg/Kg	1	100	73	70 - 130

Sample: 246668 - MFP, FLR-8, 14'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 74210
Prep Batch: 63670

Analytical Method: S 8015 D
Date Analyzed: 2010-10-07
Sample Preparation: 2010-10-07

Prep Method: S 5035
Analyzed By: ER
Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		4.66	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.81	mg/Kg	1	2.00	90	85.2 - 112
4-Bromofluorobenzene (4-BFB)		2.00	mg/Kg	1	2.00	100	68.4 - 112

Sample: 246669 - MFP, E Wall-8, 11'

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 74209
Prep Batch: 63670

Analytical Method: S 8021B
Date Analyzed: 2010-10-07
Sample Preparation: 2010-10-07

Prep Method: S 5035
Analyzed By: ER
Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.70	mg/Kg	1	2.00	85	71.6 - 116
4-Bromofluorobenzene (4-BFB)		1.97	mg/Kg	1	2.00	98	71.8 - 115

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Sample: 246669 - MFP, E Wall-8, 11'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-10-07	Analyzed By:	kg
QC Batch:	74234	Sample Preparation:	2010-10-07	Prepared By:	kg
Prep Batch:	63692				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		73.7	mg/Kg	1	100	74	70 - 130

Sample: 246669 - MFP, E Wall-8, 11'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-10-07	Analyzed By:	ER
QC Batch:	74210	Sample Preparation:	2010-10-07	Prepared By:	ER
Prep Batch:	63670				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.83	mg/Kg	1	2.00	92	85.2 - 112
4-Bromofluorobenzene (4-BFB)		1.94	mg/Kg	1	2.00	97	68.4 - 112

Sample: 246670 - MFP, W Wall-9, 10'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-10-07	Analyzed By:	kg
QC Batch:	74234	Sample Preparation:	2010-10-07	Prepared By:	kg
Prep Batch:	63692				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		73.6	mg/Kg	1	100	74	70 - 130

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Sample: 246670 - MFP, W Wall-9, 10'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 74210
Prep Batch: 63670

Analytical Method: S 8015 D
Date Analyzed: 2010-10-07
Sample Preparation: 2010-10-07

Prep Method: S 5035
Analyzed By: ER
Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	⁴	1.67	mg/Kg	1	2.00	84	85.2 - 112
4-Bromofluorobenzene (4-BFB)		1.81	mg/Kg	1	2.00	90	68.4 - 112

Sample: 246671 - MFP, FLR-9, 12'

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 74209
Prep Batch: 63670

Analytical Method: S 8021B
Date Analyzed: 2010-10-07
Sample Preparation: 2010-10-07

Prep Method: S 5035
Analyzed By: ER
Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.74	mg/Kg	1	2.00	87	71.6 - 116
4-Bromofluorobenzene (4-BFB)		2.04	mg/Kg	1	2.00	102	71.8 - 115

Sample: 246671 - MFP, FLR-9, 12'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 74234
Prep Batch: 63692

Analytical Method: S 8015 D
Date Analyzed: 2010-10-07
Sample Preparation: 2010-10-07

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

⁴Low surrogate recovery. Sample non-detect, result bias low.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		74.5	mg/Kg	1	100	74	70 - 130

Sample: 246671 - MFP, FLR-9, 12'

Laboratory:	Lubbock						
Analysis:	TPH GRO	Analytical Method:	S 8015 D		Prep Method:	S 5035	
QC Batch:	74210	Date Analyzed:	2010-10-07		Analyzed By:	ER	
Prep Batch:	63670	Sample Preparation:	2010-10-07		Prepared By:	ER	

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		2.47	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.89	mg/Kg	1	2.00	94	85.2 - 112
4-Bromofluorobenzene (4-BFB)		2.08	mg/Kg	1	2.00	104	68.4 - 112

Sample: 246672 - MFP, E Wall-9, 10'

Laboratory:	Midland						
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D		Prep Method:	N/A	
QC Batch:	74234	Date Analyzed:	2010-10-07		Analyzed By:	kg	
Prep Batch:	63692	Sample Preparation:	2010-10-07		Prepared By:	kg	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		71.2	mg/Kg	1	100	71	70 - 130

Sample: 246672 - MFP, E Wall-9, 10'

Laboratory:	Lubbock						
Analysis:	TPH GRO	Analytical Method:	S 8015 D		Prep Method:	S 5035	
QC Batch:	74210	Date Analyzed:	2010-10-07		Analyzed By:	ER	
Prep Batch:	63670	Sample Preparation:	2010-10-07		Prepared By:	ER	

continued ...

sample 246672 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	⁵	1.67	mg/Kg	1	2.00	84	85.2 - 112
4-Bromofluorobenzene (4-BFB)		1.73	mg/Kg	1	2.00	86	68.4 - 112

Sample: 246673 - MFP, W Wall-7, 18'

Laboratory: Midland
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 74125 Date Analyzed: 2010-10-05 Analyzed By: kg
 Prep Batch: 63611 Sample Preparation: 2010-10-05 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		79.8	mg/Kg	1	100	80	70 - 130

Sample: 246673 - MFP, W Wall-7, 18'

Laboratory: Midland
 Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
 QC Batch: 74118 Date Analyzed: 2010-10-05 Analyzed By: AG
 Prep Batch: 63572 Sample Preparation: 2010-10-05 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.07	mg/Kg	1	2.00	104	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.86	mg/Kg	1	2.00	93	50 - 138

⁵Low surrogate recovery. Sample non-detect, result bias low.

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Sample: 246674 - MFP, FLR-7, 20'

Laboratory: Midland

Analysis: BTEX

QC Batch: 74117

Prep Batch: 63572

Analytical Method: S 8021B

Date Analyzed: 2010-10-05

Sample Preparation: 2010-10-05

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

Parameter	Flag	RL		Units	Dilution	RL
		Result				
Benzene		<0.0100		mg/Kg	1	0.0100
Toluene		<0.0100		mg/Kg	1	0.0100
Ethylbenzene		<0.0100		mg/Kg	1	0.0100
Xylene		<0.0100		mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.68	mg/Kg	1	2.00	84	66.5 - 108
4-Bromofluorobenzene (4-BFB)		1.57	mg/Kg	1	2.00	78	50 - 139

Sample: 246674 - MFP, FLR-7, 20'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 74125

Prep Batch: 63611

Analytical Method: S 8015 D

Date Analyzed: 2010-10-05

Sample Preparation: 2010-10-05

Prep Method: N/A

Analyzed By: kg

Prepared By: kg

Parameter	Flag	RL		Units	Dilution	RL
		Result				
DRO		<50.0		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		86.8	mg/Kg	1	100	87	70 - 130

Sample: 246674 - MFP, FLR-7, 20'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 74118

Prep Batch: 63572

Analytical Method: S 8015 D

Date Analyzed: 2010-10-05

Sample Preparation: 2010-10-05

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

Parameter	Flag	RL		Units	Dilution	RL
		Result				
GRO		<1.00		mg/Kg	1	1.00

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.95	mg/Kg	1	2.00	98	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.78	mg/Kg	1	2.00	89	50 - 138

Sample: 246675 - MFP, E Wall-7, 18'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 74125 Date Analyzed: 2010-10-05 Analyzed By: kg
Prep Batch: 63611 Sample Preparation: 2010-10-05 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		77.0	mg/Kg	1	100	77	70 - 130

Sample: 246675 - MFP, E Wall-7, 18'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 74118 Date Analyzed: 2010-10-05 Analyzed By: AG
Prep Batch: 63572 Sample Preparation: 2010-10-05 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.92	mg/Kg	1	2.00	96	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.73	mg/Kg	1	2.00	86	50 - 138

Sample: 246676 - SP-1

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 74117 Date Analyzed: 2010-10-05 Analyzed By: AG
Prep Batch: 63572 Sample Preparation: 2010-10-05 Prepared By: AG

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Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.58	mg/Kg	1	2.00	79	66.5 - 108
4-Bromofluorobenzene (4-BFB)		1.46	mg/Kg	1	2.00	73	50 - 139

Sample: 246676 - SP-1

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 74125
Prep Batch: 63611

Analytical Method: S 8015 D
Date Analyzed: 2010-10-05
Sample Preparation: 2010-10-05

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		73.6	mg/Kg	1	100	74	70 - 130

Sample: 246676 - SP-1

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 74118
Prep Batch: 63572

Analytical Method: S 8015 D
Date Analyzed: 2010-10-05
Sample Preparation: 2010-10-05

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.81	mg/Kg	1	2.00	90	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.62	mg/Kg	1	2.00	81	50 - 138

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Method Blank (1) QC Batch: 74117

QC Batch: 74117 Date Analyzed: 2010-10-05 Analyzed By: AG
Prep Batch: 63572 QC Preparation: 2010-10-05 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00100	mg/Kg	0.01
Toluene		<0.00100	mg/Kg	0.01
Ethylbenzene		<0.00110	mg/Kg	0.01
Xylene		<0.00360	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.69	mg/Kg	1	2.00	84	75.6 - 110
4-Bromofluorobenzene (4-BFB)		1.58	mg/Kg	1	2.00	79	41.5 - 139

Method Blank (1) QC Batch: 74118

QC Batch: 74118 Date Analyzed: 2010-10-05 Analyzed By: AG
Prep Batch: 63572 QC Preparation: 2010-10-05 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.482	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.99	mg/Kg	1	2.00	100	76.9 - 115
4-Bromofluorobenzene (4-BFB)		1.77	mg/Kg	1	2.00	88	45.8 - 147

Method Blank (1) QC Batch: 74125

QC Batch: 74125 Date Analyzed: 2010-10-05 Analyzed By: kg
Prep Batch: 63611 QC Preparation: 2010-10-05 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		74.3	mg/Kg	1	100	74	70 - 130

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Method Blank (1) QC Batch: 74209

QC Batch: 74209 Date Analyzed: 2010-10-07 Analyzed By: ER
Prep Batch: 63670 QC Preparation: 2010-10-07 Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00462	mg/Kg	0.02
Toluene		<0.00582	mg/Kg	0.02
Ethylbenzene		<0.00433	mg/Kg	0.02
Xylene		<0.00383	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.70	mg/Kg	1	2.00	85	71.6 - 116
4-Bromofluorobenzene (4-BFB)		1.84	mg/Kg	1	2.00	92	71.8 - 115

Method Blank (1) QC Batch: 74210

QC Batch: 74210 Date Analyzed: 2010-10-07 Analyzed By: ER
Prep Batch: 63670 QC Preparation: 2010-10-07 Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
GRO		<0.241	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.90	mg/Kg	1	2.00	95	85.2 - 112
4-Bromofluorobenzene (4-BFB)		1.82	mg/Kg	1	2.00	91	68.4 - 112

Method Blank (1) QC Batch: 74234

QC Batch: 74234 Date Analyzed: 2010-10-07 Analyzed By: kg
Prep Batch: 63692 QC Preparation: 2010-10-07 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		85.5	mg/Kg	1	100	86	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 74117
Prep Batch: 63572

Date Analyzed: 2010-10-05
QC Preparation: 2010-10-05

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.81	mg/Kg	1	2.00	<0.00100	90	81.7 - 120
Toluene	1.77	mg/Kg	1	2.00	<0.00100	88	81.8 - 120
Ethylbenzene	1.77	mg/Kg	1	2.00	<0.00110	88	79.8 - 120
Xylene	5.22	mg/Kg	1	6.00	<0.00360	87	74 - 123

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.78	mg/Kg	1	2.00	<0.00100	89	81.7 - 120	2	20
Toluene	1.79	mg/Kg	1	2.00	<0.00100	90	81.8 - 120	1	20
Ethylbenzene	1.78	mg/Kg	1	2.00	<0.00110	89	79.8 - 120	1	20
Xylene	5.29	mg/Kg	1	6.00	<0.00360	88	74 - 123	1	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.63	1.75	mg/Kg	1	2.00	82	88	77.4 - 110
4-Bromofluorobenzene (4-BFB)	1.53	1.60	mg/Kg	1	2.00	76	80	46 - 140

Laboratory Control Spike (LCS-1)

QC Batch: 74118
Prep Batch: 63572

Date Analyzed: 2010-10-05
QC Preparation: 2010-10-05

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.7	mg/Kg	1	20.0	<0.482	74	56.5 - 98.2

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	14.6	mg/Kg	1	20.0	<0.482	73	56.5 - 98.2	1	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.09	2.02	mg/Kg	1	2.00	104	101	76.5 - 118
4-Bromofluorobenzene (4-BFB)	1.77	1.74	mg/Kg	1	2.00	88	87	51.1 - 150

Laboratory Control Spike (LCS-1)

QC Batch: 74125 Date Analyzed: 2010-10-05 Analyzed By: kg
Prep Batch: 63611 QC Preparation: 2010-10-05 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	271	mg/Kg	1	250	<14.6	108	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	273	mg/Kg	1	250	<14.6	109	47.5 - 144.1	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	102	99.1	mg/Kg	1	100	102	99	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 74209 Date Analyzed: 2010-10-07 Analyzed By: ER
Prep Batch: 63670 QC Preparation: 2010-10-07 Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.82	mg/Kg	1	2.00	<0.00462	91	77.8 - 118
Toluene	1.91	mg/Kg	1	2.00	<0.00582	96	76.6 - 121
Ethylbenzene	1.84	mg/Kg	1	2.00	<0.00433	92	77 - 114
Xylene	5.80	mg/Kg	1	6.00	<0.00383	97	76.9 - 117

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.78	mg/Kg	1	2.00	<0.00462	89	77.8 - 118	2	20
Toluene	1.88	mg/Kg	1	2.00	<0.00582	94	76.6 - 121	2	20
Ethylbenzene	1.81	mg/Kg	1	2.00	<0.00433	90	77 - 114	2	20
Xylene	5.69	mg/Kg	1	6.00	<0.00383	95	76.9 - 117	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)	1.68	1.62	mg/Kg	1	2.00	84	81	73.6 - 118
4-Bromofluorobenzene (4-BFB)	1.86	1.79	mg/Kg	1	2.00	93	90	73.4 - 117

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Laboratory Control Spike (LCS-1)

QC Batch: 74210
Prep Batch: 63670

Date Analyzed: 2010-10-07
QC Preparation: 2010-10-07

Analyzed By: ER
Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	20.1	mg/Kg	1	20.0	<0.241	100	70 - 130

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	20.0	mg/Kg	1	20.0	<0.241	100	70 - 130	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
Trifluorotoluene (TFT)	1.77	1.81	mg/Kg	1	2.00	88	90	79.3 - 111
4-Bromofluorobenzene (4-BFB)	1.90	1.92	mg/Kg	1	2.00	95	96	70.2 - 119

Laboratory Control Spike (LCS-1)

QC Batch: 74234
Prep Batch: 63692

Date Analyzed: 2010-10-07
QC Preparation: 2010-10-07

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	226	mg/Kg	1	250	<14.6	90	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	268	mg/Kg	1	250	<14.6	107	47.5 - 144.1	17	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	96.2	98.2	mg/Kg	1	100	96	98	70 - 130

Matrix Spike (MS-1) Spiked Sample: 246359

QC Batch: 74117
Prep Batch: 63572

Date Analyzed: 2010-10-05
QC Preparation: 2010-10-05

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.80	mg/Kg	1	2.00	<0.00100	90	75.7 - 125
Toluene	1.85	mg/Kg	1	2.00	<0.00100	92	74.4 - 125
Ethylbenzene	1.88	mg/Kg	1	2.00	<0.00110	94	72.2 - 128
Xylene	5.58	mg/Kg	1	6.00	<0.00360	93	63 - 131

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.93	mg/Kg	1	2.00	<0.00100	96	75.7 - 125	7	20
Toluene	1.98	mg/Kg	1	2.00	<0.00100	99	74.4 - 125	7	20
Ethylbenzene	2.04	mg/Kg	1	2.00	<0.00110	102	72.2 - 128	8	20
Xylene	6.04	mg/Kg	1	6.00	<0.00360	101	63 - 131	8	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.69	1.77	mg/Kg	1	2	84	88	78.8 - 109
4-Bromofluorobenzene (4-BFB)	1.58	1.64	mg/Kg	1	2	79	82	50 - 136

Matrix Spike (MS-1) Spiked Sample: 246676

QC Batch: 74118
Prep Batch: 63572

Date Analyzed: 2010-10-05
QC Preparation: 2010-10-05

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.2	mg/Kg	1	20.0	<0.482	71	50 - 150

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.5	mg/Kg	1	20.0	<0.482	78	50 - 150	9	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.10	1.76	mg/Kg	1	2	105	88	71.6 - 117
4-Bromofluorobenzene (4-BFB)	2.02	1.74	mg/Kg	1	2	101	87	50 - 170

Matrix Spike (MS-1) Spiked Sample: 246673

QC Batch: 74125
Prep Batch: 63611

Date Analyzed: 2010-10-05
QC Preparation: 2010-10-05

Analyzed By: kg
Prepared By: kg

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	238	mg/Kg	1	250	<14.6	95	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	249	mg/Kg	1	250	<14.6	100	11.7 - 152.3	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
n-Tricosane	103	102	mg/Kg	1	100	103	102	70 - 130

Matrix Spike (MS-1) Spiked Sample: 246665

QC Batch: 74209
Prep Batch: 63670

Date Analyzed: 2010-10-07
QC Preparation: 2010-10-07

Analyzed By: ER
Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.74	mg/Kg	1	2.00	<0.00462	87	55.2 - 129
Toluene	1.94	mg/Kg	1	2.00	0.0075	97	56.6 - 142
Ethylbenzene	1.98	mg/Kg	1	2.00	0.006	99	57.9 - 143
Xylene	6.26	mg/Kg	1	6.00	0.0217	104	59 - 147

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.76	mg/Kg	1	2.00	<0.00462	88	55.2 - 129	1	20
Toluene	1.94	mg/Kg	1	2.00	0.0075	97	56.6 - 142	0	20
Ethylbenzene	1.98	mg/Kg	1	2.00	0.006	99	57.9 - 143	0	20
Xylene	6.23	mg/Kg	1	6.00	0.0217	103	59 - 147	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.59	1.68	mg/Kg	1	2	80	84	59.6 - 138
4-Bromofluorobenzene (4-BFB)	1.88	1.93	mg/Kg	1	2	94	96	64.3 - 141

Matrix Spike (MS-1) Spiked Sample: 246664

QC Batch: 74210
Prep Batch: 63670

Date Analyzed: 2010-10-07
QC Preparation: 2010-10-07

Analyzed By: ER
Prepared By: ER

Report Date: October 11, 2010
2001-11193

Work Order: 10100520
South Monument Gathering Sour

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	18.0	mg/Kg	2	20.0	<0.482	90	54.2 - 135

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	18.7	mg/Kg	2	20.0	<0.482	94	54.2 - 135	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)	1.64	1.69	mg/Kg	2	2	82	84	63.8 - 126
4-Bromofluorobenzene (4-BFB)	2.28	2.24	mg/Kg	2	2	114	112	70.2 - 137

Matrix Spike (MS-1) Spiked Sample: 247007

QC Batch: 74234
Prep Batch: 63692

Date Analyzed: 2010-10-07
QC Preparation: 2010-10-07

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	213	mg/Kg	1	250	<14.6	85	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	223	mg/Kg	1	250	<14.6	89	11.7 - 152.3	5	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	95.2	97.4	mg/Kg	1	100	95	97	70 - 130

Standard (CCV-2)

QC Batch: 74117

Date Analyzed: 2010-10-05

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0895	90	80 - 120	2010-10-05
Toluene		mg/Kg	0.100	0.0885	88	80 - 120	2010-10-05
Ethylbenzene		mg/Kg	0.100	0.0875	88	80 - 120	2010-10-05
Xylene		mg/Kg	0.300	0.259	86	80 - 120	2010-10-05

Report Date: October 11, 2010
2001-11193

Work Order: 10100520
South Monument Gathering Sour

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Standard (CCV-3)

QC Batch: 74117

Date Analyzed: 2010-10-05

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0893	89	80 - 120	2010-10-05
Toluene		mg/Kg	0.100	0.0904	90	80 - 120	2010-10-05
Ethylbenzene		mg/Kg	0.100	0.0896	90	80 - 120	2010-10-05
Xylene		mg/Kg	0.300	0.264	88	80 - 120	2010-10-05

Standard (CCV-2)

QC Batch: 74118

Date Analyzed: 2010-10-05

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.00	100	80 - 120	2010-10-05

Standard (CCV-3)

QC Batch: 74118

Date Analyzed: 2010-10-05

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.923	92	80 - 120	2010-10-05

Standard (CCV-1)

QC Batch: 74125

Date Analyzed: 2010-10-05

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	263	105	80 - 120	2010-10-05

Standard (CCV-2)

QC Batch: 74125

Date Analyzed: 2010-10-05

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	239	96	80 - 120	2010-10-05

Standard (CCV-1)

QC Batch: 74209

Date Analyzed: 2010-10-07

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0908	91	80 - 120	2010-10-07
Toluene		mg/Kg	0.100	0.0950	95	80 - 120	2010-10-07
Ethylbenzene		mg/Kg	0.100	0.0930	93	80 - 120	2010-10-07
Xylene		mg/Kg	0.300	0.293	98	80 - 120	2010-10-07

Standard (CCV-2)

QC Batch: 74209

Date Analyzed: 2010-10-07

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0927	93	80 - 120	2010-10-07
Toluene		mg/Kg	0.100	0.0969	97	80 - 120	2010-10-07
Ethylbenzene		mg/Kg	0.100	0.0937	94	80 - 120	2010-10-07
Xylene		mg/Kg	0.300	0.293	98	80 - 120	2010-10-07

Standard (CCV-1)

QC Batch: 74210

Date Analyzed: 2010-10-07

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.998	100	80 - 120	2010-10-07

Standard (CCV-2)

QC Batch: 74210

Date Analyzed: 2010-10-07

Analyzed By: ER

Report Date: October 11, 2010
2001-11193

Work Order: 10100520
South Monument Gathering Sour

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.00	100	80 - 120	2010-10-07

Standard (CCV-1)

QC Batch: 74234 Date Analyzed: 2010-10-07 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	275	110	80 - 120	2010-10-07

Standard (CCV-2)

QC Batch: 74234 Date Analyzed: 2010-10-07 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	247	99	80 - 120	2010-10-07

Standard (CCV-3)

QC Batch: 74234 Date Analyzed: 2010-10-07 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	247	99	80 - 120	2010-10-07

Standard (CCV-4)

QC Batch: 74234 Date Analyzed: 2010-10-07 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	237	95	80 - 120	2010-10-07

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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Lubbock, Texas 79424
Tel (806) 794-1296
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1 (800) 378-12965002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name:

NDVA

Phone #:

Address: (Street, City, Zip)

Fax #:

Contact Person:

Ron Rounsaville

E-mail:

Invoice to:

(If different from above)

Project #:

SRS# 2001-11193

Project Name:

S. Mont. Gath. Soul

Project Location (including state):

Lea Co. NM

Sample Signature:

R. Rounsaville

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX			PRESERVATIVE METHOD				SAMPLING	
				WATER	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE
246664	MFP, W. Wall-6, 3'	1	402								X	
6665	MFP, FLR-6, 4'	1									X	
6666	MFP, E. Wall-6, 3'	1									X	
6667	MFP, W. Wall-8, 12'	1									X	
6668	MFP, FLR-8, 14'	1									X	
6669	MFP, E. Wall-8, 11'	1									X	
6670	MFP, W. Wall-9, 10'	1									X	
6671	MFP, FLR-9, 12'	1									X	
6672	MFP, E. Wall-9, 10'	1									X	

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 8010/200.7	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, F1, S04, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard
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Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR
R. Rounsaville	Trace	10-5-10	1447	R. Rounsaville	Trace	10-6-10	1414	1414	1414	1414
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR
R. Rounsaville	Trace	10-5-10	1447	R. Rounsaville	Trace	10-6-10	1414	1414	1414	1414
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR
R. Rounsaville	Trace	10-5-10	1447	R. Rounsaville	Trace	10-6-10	1414	1414	1414	1414

LAB USE ONLY

REMARKS:

* Midland - TPH OK

* Lubbock - BTEX

* Dry Weight Basis Required

* TRRP Report Required

* Check if Special Reporting Limits Are Needed

* TPH in Midland

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

Carrier #

LS 2K527002

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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
Fax (915) 585-4944
1 (888) 588-3443

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

Company Name:	NOVA	Phone #:	
Address:	(Street, City, Zip)	Fax #:	
Contact Person:	Ren Rounsaville	E-mail:	
Invoice to:			
(If different from above)	PHAINS		
Project #:	SRS# 2001-11193	Project Name:	S. Mont. Gath. Sec.
Project Location (including state):	Lea Co. NM	Sampler Signature:	

[illegible]

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST
<i>[Signature]</i>		10-5-10	1447	<i>[Signature]</i>	Trace	10/5/10	14:47	OBS COR
<i>[Signature]</i>		10/6/10	16:00	<i>[Signature]</i>	Trace	10-6-10	9:30	OBS COR
<i>[Signature]</i>				<i>[Signature]</i>	Trace			OBS COR

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

SECRET

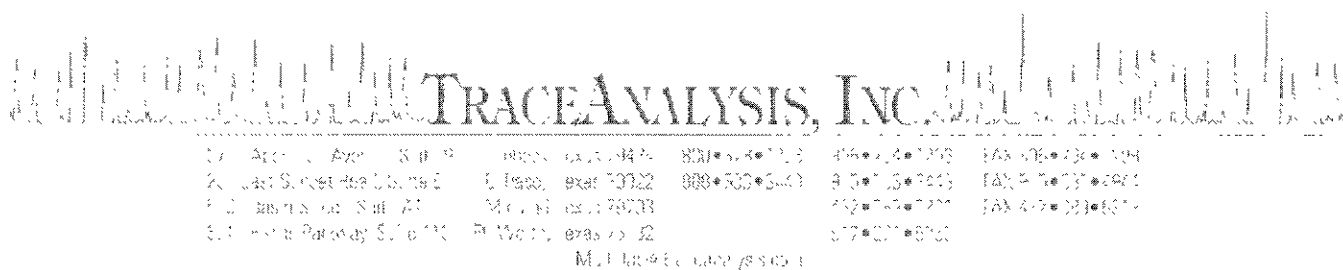
Carrier #

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB USE ONLY		REMARKS:
Intact ☒ N.		Only cish TPH Turn Around Time if different from standard Hold
Headspace Y/N NA		
Dry Weight Basis Required ☐		
TRRP Report Required ☐		
Check If Special Reporting Limits Are Needed ☐		
Log-in-Review ☒		
BTEX 8021 / 602 / 8260 / 624	X	
TPH 418.1 / TX1005 / TX1005 Exit(C35)	X	
TPH 8015 GRO / DRO TVHC	X	
PAH 8270 / 625	X	
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, F1, SO4, NO3, NO2, Alkalinity		
Na, Ca, Mg, K, TDS, EC		

Carrie



Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
 LELAP-02003
 Kansas E-10317

El Paso: T104704221-08-TX
 LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ron Rounsaville
 Nova Safety & Environmental
 2057 Commerce St.
 Midland, TX, 79703

Report Date: October 22, 2010

Work Order: 10101921



Project Location: South of Monument, NM
 Project Name: South Monument Gathering Sour
 Project Number: 2001-11193

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
247905	S. Wall-1, 10'	soil	2010-10-18	15:37	2010-10-19
247906	S. Wall-2, 10'	soil	2010-10-18	15:42	2010-10-19
247907	S. Wall-3, 20'	soil	2010-10-18	15:12	2010-10-19
247908	S. Wall-4, 20'	soil	2010-10-18	15:16	2010-10-19
247909	S. Wall-5, 20'	soil	2010-10-18	15:21	2010-10-19

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.

This report consists of a total of 14 pages and shall not be reproduced except in its entirety, without written approval of

TraceAnalysis, Inc.

A handwritten signature in black ink that reads "Michael Abel". The signature is written in a cursive, flowing style.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-10-19 and assigned to work order 10101921. Samples for work order 10101921 were received intact at a temperature of 4.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	63987	2010-10-19 at 16:00	74588	2010-10-19 at 19:56
TPH DRO - NEW	S 8015 D	64018	2010-10-20 at 10:06	74623	2010-10-20 at 10:06
TPH GRO	S 8015 D	63987	2010-10-19 at 16:00	74589	2010-10-19 at 20:23

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 10101921 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: 247905 - S. Wall-1, 10'

Laboratory: Midland
Analysis: BTEX
QC Batch: 74588
Prep Batch: 63987

Analytical Method: S 8021B
Date Analyzed: 2010-10-19
Sample Preparation: 2010-10-19

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.98	mg/Kg	1	2.00	99	66.5 - 108
4-Bromofluorobenzene (4-BFB)		1.66	mg/Kg	1	2.00	83	50 - 139

Sample: 247905 - S. Wall-1, 10'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 74623
Prep Batch: 64018

Analytical Method: S 8015 D
Date Analyzed: 2010-10-20
Sample Preparation: 2010-10-20

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		81.7	mg/Kg	1	100	82	70 - 130

Sample: 247905 - S. Wall-1, 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 74589
Prep Batch: 63987

Analytical Method: S 8015 D
Date Analyzed: 2010-10-19
Sample Preparation: 2010-10-19

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

continued ...

Report Date: October 22, 2010
2001-11193

Work Order: 10101921
South Monument Gathering Sour

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South of Monument, NM

sample 247905 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.18	mg/Kg	1	2.00	109	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.90	mg/Kg	1	2.00	95	50 - 138

Sample: 247906 - S. Wall-2, 10'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 74623 Date Analyzed: 2010-10-20 Analyzed By: kg
Prep Batch: 64018 Sample Preparation: 2010-10-20 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		84.5	mg/Kg	1	100	84	70 - 130

Sample: 247906 - S. Wall-2, 10'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 74589 Date Analyzed: 2010-10-19 Analyzed By: AG
Prep Batch: 63987 Sample Preparation: 2010-10-19 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.37	mg/Kg	1	2.00	118	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.86	mg/Kg	1	2.00	93	50 - 138

Report Date: October 22, 2010
2001-11193

Work Order: 10101921
South Monument Gathering Sour

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South of Monument, NM

Sample: 247907 - S. Wall-3, 20'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	74623	Date Analyzed:	2010-10-20
Prep Batch:	64018	Sample Preparation:	2010-10-20
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		86.0	mg/Kg	1	100	86	70 - 130

Sample: 247907 - S. Wall-3, 20'

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	74589	Date Analyzed:	2010-10-19
Prep Batch:	63987	Sample Preparation:	2010-10-19
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.23	mg/Kg	1	2.00	112	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.84	mg/Kg	1	2.00	92	50 - 138

Sample: 247908 - S. Wall-4, 20'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	74623	Date Analyzed:	2010-10-20
Prep Batch:	64018	Sample Preparation:	2010-10-20
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		83.5	mg/Kg	1	100	84	70 - 130

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Sample: 247908 - S. Wall-4, 20'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 74589
Prep Batch: 63987

Analytical Method: S 8015 D
Date Analyzed: 2010-10-19
Sample Preparation: 2010-10-19

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.35	mg/Kg	1	2.00	118	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.86	mg/Kg	1	2.00	93	50 - 138

Sample: 247909 - S. Wall-5, 20'

Laboratory: Midland
Analysis: BTEX
QC Batch: 74588
Prep Batch: 63987

Analytical Method: S 8021B
Date Analyzed: 2010-10-19
Sample Preparation: 2010-10-19

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		0.175	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.91	mg/Kg	1	2.00	96	66.5 - 108
4-Bromofluorobenzene (4-BFB)		1.73	mg/Kg	1	2.00	86	50 - 139

Sample: 247909 - S. Wall-5, 20'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 74623
Prep Batch: 64018

Analytical Method: S 8015 D
Date Analyzed: 2010-10-20
Sample Preparation: 2010-10-20

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		87.2	mg/Kg	1	100	87	70 - 130

Sample: 247909 - S. Wall-5, 20'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 74589
Prep Batch: 63987

Analytical Method: S 8015 D
Date Analyzed: 2010-10-19
Sample Preparation: 2010-10-19

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		11.0	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.27	mg/Kg	1	2.00	114	73.4 - 122
4-Bromofluorobenzene (4-BFB)		2.01	mg/Kg	1	2.00	100	50 - 138

Method Blank (1) QC Batch: 74588

QC Batch: 74588
Prep Batch: 63987

Date Analyzed: 2010-10-19
QC Preparation: 2010-10-19

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00750	mg/Kg	0.02
Toluene		<0.0109	mg/Kg	0.02
Ethylbenzene		<0.00630	mg/Kg	0.02
Xylene		<0.0144	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.21	mg/Kg	1	2.00	110	75.6 - 110
4-Bromofluorobenzene (4-BFB)		1.62	mg/Kg	1	2.00	81	41.5 - 139

Method Blank (1) QC Batch: 74589

QC Batch: 74589
Prep Batch: 63987

Date Analyzed: 2010-10-19
QC Preparation: 2010-10-19

Analyzed By: AG
Prepared By: AG

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Parameter	Flag	MDL Result	Units	RL
GRO		<0.747	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.05	mg/Kg	1	2.00	102	76.9 - 115
4-Bromofluorobenzene (4-BFB)		1.72	mg/Kg	1	2.00	86	45.8 - 147

Method Blank (1) QC Batch: 74623

QC Batch: 74623 Date Analyzed: 2010-10-20 Analyzed By: kg
Prep Batch: 64018 QC Preparation: 2010-10-20 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		102	mg/Kg	1	100	102	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 74588 Date Analyzed: 2010-10-19 Analyzed By: AG
Prep Batch: 63987 QC Preparation: 2010-10-19 Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.85	mg/Kg	1	2.00	<0.00750	92	81.7 - 120
Toluene	1.95	mg/Kg	1	2.00	<0.0109	98	81.8 - 120
Ethylbenzene	1.95	mg/Kg	1	2.00	<0.00630	98	79.8 - 120
Xylene	5.65	mg/Kg	1	6.00	<0.0144	94	74 - 123

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.88	mg/Kg	1	2.00	<0.00750	94	81.7 - 120	2	20
Toluene	1.96	mg/Kg	1	2.00	<0.0109	98	81.8 - 120	0	20
Ethylbenzene	1.93	mg/Kg	1	2.00	<0.00630	96	79.8 - 120	1	20
Xylene	5.67	mg/Kg	1	6.00	<0.0144	94	74 - 123	0	20

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

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Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.03	1.62	mg/Kg	1	2.00	102	81	77.4 - 110
4-Bromofluorobenzene (4-BFB)	1.60	1.46	mg/Kg	1	2.00	80	73	46 - 140

Laboratory Control Spike (LCS-1)

QC Batch: 74589
Prep Batch: 63987

Date Analyzed: 2010-10-19
QC Preparation: 2010-10-19

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.2	mg/Kg	1	20.0	<0.747	71	56.5 - 98.2

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.3	mg/Kg	1	20.0	<0.747	76	56.5 - 98.2	7	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.17	2.16	mg/Kg	1	2.00	108	108	76.5 - 118
4-Bromofluorobenzene (4-BFB)	1.84	1.84	mg/Kg	1	2.00	92	92	51.1 - 150

Laboratory Control Spike (LCS-1)

QC Batch: 74623
Prep Batch: 64018

Date Analyzed: 2010-10-20
QC Preparation: 2010-10-20

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	254	mg/Kg	1	250	<14.6	102	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	275	mg/Kg	1	250	<14.6	110	47.5 - 144.1	8	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	108	115	mg/Kg	1	100	108	115	70 - 130

Matrix Spike (MS-1) Spiked Sample: 247905

QC Batch: 74588
Prep Batch: 63987

Date Analyzed: 2010-10-19
QC Preparation: 2010-10-19

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.05	mg/Kg	1	2.00	<0.00750	102	75.7 - 125
Toluene	2.14	mg/Kg	1	2.00	<0.0109	107	74.4 - 125
Ethylbenzene	2.18	mg/Kg	1	2.00	<0.00630	109	72.2 - 128
Xylene	6.26	mg/Kg	1	6.00	<0.0144	104	63 - 131

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.04	mg/Kg	1	2.00	<0.00750	102	75.7 - 125	0	20
Toluene	2.08	mg/Kg	1	2.00	<0.0109	104	74.4 - 125	3	20
Ethylbenzene	2.13	mg/Kg	1	2.00	<0.00630	106	72.2 - 128	2	20
Xylene	6.32	mg/Kg	1	6.00	<0.0144	105	63 - 131	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)	2.00	1.82	mg/Kg	1	2	100	91	78.8 - 109
4-Bromofluorobenzene (4-BFB)	1.69	1.58	mg/Kg	1	2	84	79	50 - 136

Matrix Spike (MS-1) Spiked Sample: 247907

QC Batch: 74589
Prep Batch: 63987

Date Analyzed: 2010-10-19
QC Preparation: 2010-10-19

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	13.2	mg/Kg	1	20.0	<0.747	66	50 - 150

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	14.9	mg/Kg	1	20.0	<0.747	74	50 - 150	12	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.96	2.02	mg/Kg	1	2	98	101	71.6 - 117
4-Bromofluorobenzene (4-BFB)	1.71	1.77	mg/Kg	1	2	86	88	50 - 170

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Matrix Spike (MS-1) Spiked Sample: 247909

QC Batch: 74623
Prep Batch: 64018

Date Analyzed: 2010-10-20
QC Preparation: 2010-10-20

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	279	mg/Kg	1	250	25.8	101	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	275	mg/Kg	1	250	25.8	100	11.7 - 152.3	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	108	107	mg/Kg	1	100	108	107	70 - 130

Standard (CCV-1)

QC Batch: 74588

Date Analyzed: 2010-10-19

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.101	101	80 - 120	2010-10-19
Toluene		mg/Kg	0.100	0.107	107	80 - 120	2010-10-19
Ethylbenzene		mg/Kg	0.100	0.0980	98	80 - 120	2010-10-19
Xylene		mg/Kg	0.300	0.287	96	80 - 120	2010-10-19

Standard (CCV-2)

QC Batch: 74588

Date Analyzed: 2010-10-19

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0863	86	80 - 120	2010-10-19
Toluene		mg/Kg	0.100	0.0959	96	80 - 120	2010-10-19
Ethylbenzene		mg/Kg	0.100	0.0941	94	80 - 120	2010-10-19
Xylene		mg/Kg	0.300	0.274	91	80 - 120	2010-10-19

Standard (CCV-3)

QC Batch: 74588

Date Analyzed: 2010-10-19

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0898	90	80 - 120	2010-10-19
Toluene		mg/Kg	0.100	0.0971	97	80 - 120	2010-10-19
Ethylbenzene		mg/Kg	0.100	0.0950	95	80 - 120	2010-10-19
Xylene		mg/Kg	0.300	0.280	93	80 - 120	2010-10-19

Standard (CCV-1)

QC Batch: 74589 Date Analyzed: 2010-10-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.932	93	80 - 120	2010-10-19

Standard (CCV-2)

QC Batch: 74589 Date Analyzed: 2010-10-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.978	98	80 - 120	2010-10-19

Standard (CCV-3)

QC Batch: 74589 Date Analyzed: 2010-10-19 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.990	99	80 - 120	2010-10-19

Standard (CCV-2)

QC Batch: 74623 Date Analyzed: 2010-10-20 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	241	96	80 - 120	2010-10-20

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Standard (CCV-3)

QC Batch: 74623

Date Analyzed: 2010-10-20

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	295	118	80 - 120	2010-10-20

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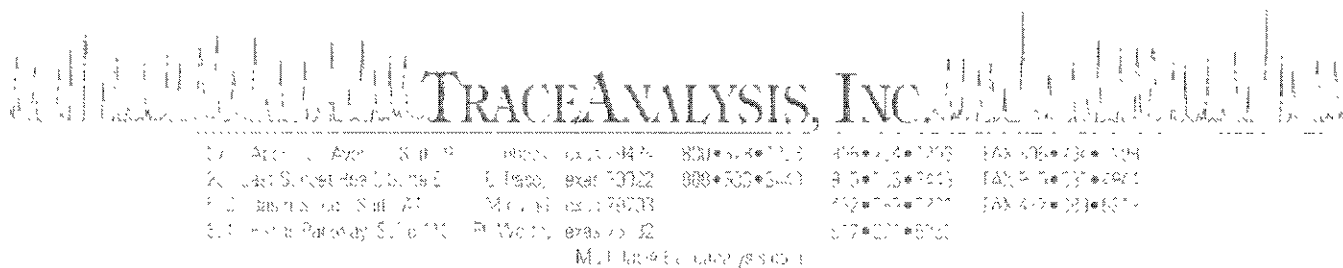
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Carrier #



Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: December 3, 2010

Work Order: 10120121



Project Location: South of Monument, NM
Project Name: South Monument Gathering Sour
Project Number: 2001-11193

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
251934	S Wall-6, 15'	soil	2010-11-30	14:40	2010-12-01
251935	S Wall-7, 12'	soil	2010-11-30	14:45	2010-12-01
251936	SW Corner, N Wall-1, 15'	soil	2010-11-30	14:50	2010-12-01
251937	SW Corner, N Wall-2 20'	soil	2010-11-30	14:55	2010-12-01

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.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-12-01 and assigned to work order 10120121. Samples for work order 10120121 were received intact at a temperature of 7.6 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	65059	2010-12-02 at 14:12	75844	2010-12-02 at 14:12
TPH GRO	S 8015 D	65021	2010-12-02 at 08:20	75804	2010-12-02 at 10:22

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 10120121 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: 251934 - S Wall-6, 15'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-02	Analyzed By:	kg
QC Batch:	75844	Sample Preparation:	2010-12-02	Prepared By:	kg
Prep Batch:	65059				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		84.9	mg/Kg	1	100	85	70 - 130

Sample: 251934 - S Wall-6, 15'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-12-02	Analyzed By:	AG
QC Batch:	75804	Sample Preparation:	2010-12-02	Prepared By:	AG
Prep Batch:	65021				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.77	mg/Kg	1	2.00	88	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.68	mg/Kg	1	2.00	84	42 - 159

Sample: 251935 - S Wall-7, 12'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-02	Analyzed By:	kg
QC Batch:	75844	Sample Preparation:	2010-12-02	Prepared By:	kg
Prep Batch:	65059				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Report Date: December 3, 2010
2001-11193

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		86.6	mg/Kg	1	100	87	70 - 130

Sample: 251935 - S Wall-7, 12'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	75804	Date Analyzed:	2010-12-02	Analyzed By:	AG
Prep Batch:	65021	Sample Preparation:	2010-12-02	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.93	mg/Kg	1	2.00	96	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.87	mg/Kg	1	2.00	94	42 - 159

Sample: 251936 - SW Corner, N Wall-1, 15'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75844	Date Analyzed:	2010-12-02	Analyzed By:	kg
Prep Batch:	65059	Sample Preparation:	2010-12-02	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		87.7	mg/Kg	1	100	88	70 - 130

Sample: 251936 - SW Corner, N Wall-1, 15'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	75804	Date Analyzed:	2010-12-02	Analyzed By:	AG
Prep Batch:	65021	Sample Preparation:	2010-12-02	Prepared By:	AG

continued ...

sample 251936 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.16	mg/Kg	1	2.00	58	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.16	mg/Kg	1	2.00	58	42 - 159

Sample: 251937 - SW Corner, N Wall-2 20'

Laboratory: Midland
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 75844 Date Analyzed: 2010-12-02 Analyzed By: kg
 Prep Batch: 65059 Sample Preparation: 2010-12-02 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		484	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	¹	146	mg/Kg	1	100	146	70 - 130

Sample: 251937 - SW Corner, N Wall-2 20'

Laboratory: Midland
 Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
 QC Batch: 75804 Date Analyzed: 2010-12-02 Analyzed By: AG
 Prep Batch: 65021 Sample Preparation: 2010-12-02 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		108	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	²	0.940	mg/Kg	1	2.00	47	48.5 - 152

continued ...

¹High surrogate recovery due to peak interference.

²Surrogate out due to peak interference.

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sample continued ...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		1.23	mg/Kg	1	2.00	62	42 - 159

Method Blank (1) QC Batch: 75804

QC Batch: 75804 Date Analyzed: 2010-12-02 Analyzed By: AG
Prep Batch: 65021 QC Preparation: 2010-12-02 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.17	mg/Kg	1	2.00	108	67.6 - 150
4-Bromofluorobenzene (4-BFB)		2.00	mg/Kg	1	2.00	100	52.4 - 130

Method Blank (1) QC Batch: 75844

QC Batch: 75844 Date Analyzed: 2010-12-02 Analyzed By: kg
Prep Batch: 65059 QC Preparation: 2010-12-02 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		71.9	mg/Kg	1	100	72	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 75804 Date Analyzed: 2010-12-02 Analyzed By: AG
Prep Batch: 65021 QC Preparation: 2010-12-02 Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.6	mg/Kg	1	20.0	<1.65	88	69.9 - 95.4

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

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Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	18.4	mg/Kg	1	20.0	<1.65	92	69.9 - 95.4	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)	1.98	2.06	mg/Kg	1	2.00	99	103	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.90	2.02	mg/Kg	1	2.00	95	101	65.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 75844
Prep Batch: 65059

Date Analyzed: 2010-12-02
QC Preparation: 2010-12-02

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	299	mg/Kg	1	250	<14.6	120	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	260	mg/Kg	1	250	<14.6	104	47.5 - 144.1	14	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	108	108	mg/Kg	1	100	108	108	70 - 130

Matrix Spike (MS-1) Spiked Sample: 251934

QC Batch: 75804
Prep Batch: 65021

Date Analyzed: 2010-12-02
QC Preparation: 2010-12-02

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.8	mg/Kg	1	20.0	<1.65	84	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	18.7	mg/Kg	1	20.0	<1.65	94	61.8 - 114	11	20

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

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Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.20	1.40	mg/Kg	1	2	60	70	50 - 162
4-Bromofluorobenzene (4-BFB)	1.28	1.49	mg/Kg	1	2	64	74	50 - 162

Matrix Spike (MS-1) Spiked Sample: 251937

QC Batch: 75844 Date Analyzed: 2010-12-02 Analyzed By: kg
Prep Batch: 65059 QC Preparation: 2010-12-02 Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	730	mg/Kg	1	250	484	98	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	659	mg/Kg	1	250	484	70	11.7 - 152.3	10	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane ^{3 4}	154	146	mg/Kg	1	100	154	146	70 - 130

Standard (CCV-1)

QC Batch: 75804 Date Analyzed: 2010-12-02 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.20	120	80 - 120	2010-12-02

Standard (CCV-2)

QC Batch: 75804 Date Analyzed: 2010-12-02 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.07	107	80 - 120	2010-12-02

³High surrogate recovery due to peak interference.

⁴High surrogate recovery due to peak interference.

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Standard (CCV-1)

QC Batch: 75844

Date Analyzed: 2010-12-02

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	289	116	80 - 120	2010-12-02

Standard (CCV-2)

QC Batch: 75844

Date Analyzed: 2010-12-02

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	292	117	80 - 120	2010-12-02

Standard (CCV-3)

QC Batch: 75844

Date Analyzed: 2010-12-02

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	296	118	80 - 120	2010-12-02

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2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
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Company Name: NOVA		Phone #:	
Address: (Street, City, Zip)		Fax #:	
Contact Person: Ron Rounsaville		E-mail:	
Invoice to: (If different from above)			
Project #: 2001-11193		Project Name: S. Mont. Gath - Sour	
Project Location (including state): Lea County, NM		Sampler Signature: <i>[Signature]</i>	

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	
26984	S. Well-6, 15'	1	402	X								X			11/30/06	1440
935	S. Well-7, 12'	1		X								X				1445
936	S.W. Corner, N. wall-15'	1		X								X				1450
937	S.W. Cor, N. wall-2, 20'	1		X								X				1455

MTBE	8021 / 602 / 8260 / 624	
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		
PCBs 8082 / 608		
Pesticides 8081 / 608		
BOD, TSS, pH		
Moisture Content		
Cl, F, S04, NO3, NO2, Alkalinity		
Na, Ca, Mg, K, TDS, EC		
Turn Around Time if different from standard		

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB USE ONLY

REMARKS: **All tests Midland**

Intact ☒ N

Headspace ☒ Y / ☒ N / ☒ R

Dry Weight Basis Required ☐

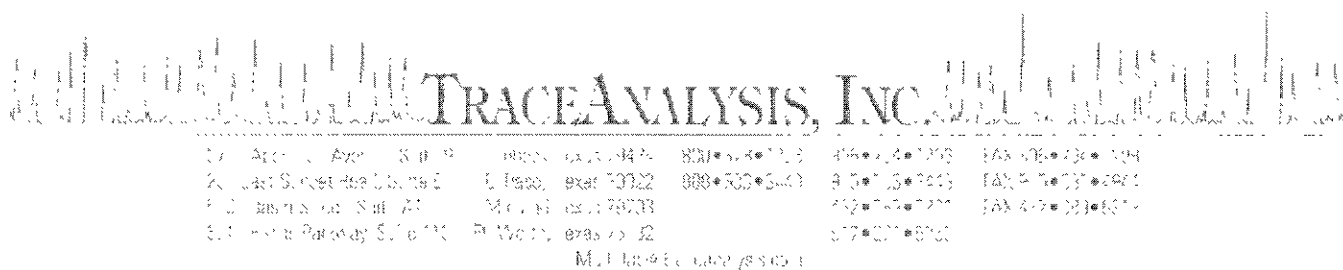
TRRP Report Required ☐

Check if Special Reporting Limits Are Needed ☐

Log-in-Review ☐

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

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Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: December 9, 2010

Work Order: 10120322



Project Location: South of Monument, NM
Project Name: South Monument Gathering Sour
Project Number: 2001-11193

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
252274	N Stockpile-A	soil	2010-12-02	12:05	2010-12-03
252275	N Stockpile-B	soil	2010-12-02	12:15	2010-12-03

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.

This report consists of a total of 8 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-12-03 and assigned to work order 10120322. Samples for work order 10120322 were received intact at a temperature of 3.7 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	65148	2010-12-07 at 14:14	75957	2010-12-07 at 14:14
TPH GRO	S 8015 D	65167	2010-12-08 at 08:30	75980	2010-12-08 at 10:07

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 10120322 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: 252274 - N Stockpile-A

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-07	Analyzed By:	kg
QC Batch:	75957	Sample Preparation:	2010-12-07	Prepared By:	kg
Prep Batch:	65148				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		81.2	mg/Kg	1	100	81	70 - 130

Sample: 252274 - N Stockpile-A

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-12-08	Analyzed By:	AG
QC Batch:	75980	Sample Preparation:	2010-12-08	Prepared By:	AG
Prep Batch:	65167				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.33	mg/Kg	1	2.00	66	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.24	mg/Kg	1	2.00	62	42 - 159

Sample: 252275 - N Stockpile-B

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-07	Analyzed By:	kg
QC Batch:	75957	Sample Preparation:	2010-12-07	Prepared By:	kg
Prep Batch:	65148				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		77.3	mg/Kg	1	100	77	70 - 130

Sample: 252275 - N Stockpile-B

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 75980
Prep Batch: 65167

Analytical Method: S 8015 D
Date Analyzed: 2010-12-08
Sample Preparation: 2010-12-08

Prep Method: S 5035
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.56	mg/Kg	1	2.00	78	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.46	mg/Kg	1	2.00	73	42 - 159

Method Blank (1) QC Batch: 75957

QC Batch: 75957
Prep Batch: 65148

Date Analyzed: 2010-12-07
QC Preparation: 2010-12-07

Analyzed By: kg
Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		81.6	mg/Kg	1	100	82	70 - 130

Method Blank (1) QC Batch: 75980

QC Batch: 75980
Prep Batch: 65167

Date Analyzed: 2010-12-08
QC Preparation: 2010-12-08

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.91	mg/Kg	1	2.00	96	52.4 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 75957 Date Analyzed: 2010-12-07 Analyzed By: kg
Prep Batch: 65148 QC Preparation: 2010-12-07 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	178	mg/Kg	1	250	<14.6	71	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	178	mg/Kg	1	250	<14.6	71	47.5 - 144.1	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
n-Tricosane	101	98.4	mg/Kg	1	100	101	98	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 75980 Date Analyzed: 2010-12-08 Analyzed By: AG
Prep Batch: 65167 QC Preparation: 2010-12-08 Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.3	mg/Kg	1	20.0	<1.65	86	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	17.7	mg/Kg	1	20.0	<1.65	88	69.9 - 95.4	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)	2.13	2.12	mg/Kg	1	2.00	106	106	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.99	2.00	mg/Kg	1	2.00	100	100	65.2 - 132

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Matrix Spike (MS-1) Spiked Sample: 252565

QC Batch: 75957 Date Analyzed: 2010-12-07 Analyzed By: kg
Prep Batch: 65148 QC Preparation: 2010-12-07 Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	220	mg/Kg	1	250	<14.6	88	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	223	mg/Kg	1	250	<14.6	89	11.7 - 152.3	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	83.8	81.7	mg/Kg	1	100	84	82	70 - 130

Matrix Spike (MS-1) Spiked Sample: 252565

QC Batch: 75980 Date Analyzed: 2010-12-08 Analyzed By: AG
Prep Batch: 65167 QC Preparation: 2010-12-08 Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.2	mg/Kg	1	20.0	<1.65	76	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	14.8	mg/Kg	1	20.0	<1.65	74	61.8 - 114	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)	1.81	1.35	mg/Kg	1	2	90	68	50 - 162
4-Bromofluorobenzene (4-BFB)	1.86	1.41	mg/Kg	1	2	93	70	50 - 162

Standard (CCV-1)

QC Batch: 75957 Date Analyzed: 2010-12-07 Analyzed By: kg

Report Date: December 9, 2010
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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	203	81	80 - 120	2010-12-07

Standard (CCV-2)

QC Batch: 75957 Date Analyzed: 2010-12-07 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	207	83	80 - 120	2010-12-07

Standard (CCV-1)

QC Batch: 75980 Date Analyzed: 2010-12-08 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.02	102	80 - 120	2010-12-08

Standard (CCV-2)

QC Batch: 75980 Date Analyzed: 2010-12-08 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.06	106	80 - 120	2010-12-08

10/20322

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

Company Name:	NOVA	Phone #:	
Address:	(Street, City, Zip)	Fax #:	
Contact Person:	Ran Rounsaville	E-mail:	
Invoice to:	PLAINS	Project Name:	S. MONT. GATH. SEAR
(If different from above)		Sampler Signature:	<i>[Signature]</i>
Project #:	2001-11193		
Project Location (including state):	LOG CO. NM		

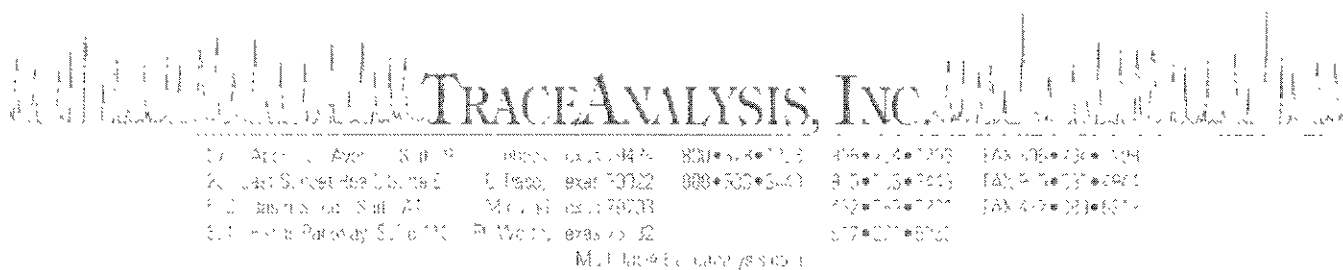
ANALYSIS REQUEST

(Circle or Specify Method No.)

[illegible][illegible]

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

ORIGINAL COPY



Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: December 9, 2010

Work Order: 10120721



Project Location: South of Monument, NM
Project Name: South Monument Gathering Sour
Project Number: 2001-11193

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
252559	Floor F-1, 10'	soil	2010-12-06	14:30	2010-12-07
252560	Floor F-2, 10'	soil	2010-12-06	14:26	2010-12-07
252561	East Wall EW-1, 8'	soil	2010-12-06	14:34	2010-12-07
252562	South Wall SW-1, 8'	soil	2010-12-06	14:37	2010-12-07
252563	North Wall NW-1, 8'	soil	2010-12-06	14:41	2010-12-07
252564	South Wall SW-2, 6'	soil	2010-12-06	14:44	2010-12-07
252565	West Wall WW-1, 7'	soil	2010-12-06	14:47	2010-12-07

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.

This report consists of a total of 12 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink that reads "Michael Abel". The signature is written in a cursive, flowing style.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-12-07 and assigned to work order 10120721. Samples for work order 10120721 were received intact at a temperature of 3.5 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	65148	2010-12-07 at 14:14	75957	2010-12-07 at 14:14
TPH GRO	S 8015 D	65167	2010-12-08 at 08:30	75980	2010-12-08 at 10:07

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 10120721 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.

Report Date: December 9, 2010
2001-11193

Work Order: 10120721
South Monument Gathering Sour

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South of Monument, NM

Analytical Report

Sample: 252559 - Floor F-1, 10'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-07	Analyzed By:	kg
QC Batch:	75957	Sample Preparation:	2010-12-07	Prepared By:	kg
Prep Batch:	65148				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		75.9	mg/Kg	1	100	76	70 - 130

Sample: 252559 - Floor F-1, 10'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-12-08	Analyzed By:	AG
QC Batch:	75980	Sample Preparation:	2010-12-08	Prepared By:	AG
Prep Batch:	65167				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.84	mg/Kg	1	2.00	92	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.74	mg/Kg	1	2.00	87	42 - 159

Sample: 252560 - Floor F-2, 10'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-07	Analyzed By:	kg
QC Batch:	75957	Sample Preparation:	2010-12-07	Prepared By:	kg
Prep Batch:	65148				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Report Date: December 9, 2010
2001-11193

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South Monument Gathering Sour

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South of Monument, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		78.8	mg/Kg	1	100	79	70 - 130

Sample: 252560 - Floor F-2, 10'

Laboratory:	Midland						
Analysis:	TPH GRO	Analytical Method:	S 8015 D			Prep Method:	S 5035
QC Batch:	75980	Date Analyzed:	2010-12-08			Analyzed By:	AG
Prep Batch:	65167	Sample Preparation:	2010-12-08			Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.49	mg/Kg	1	2.00	74	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.43	mg/Kg	1	2.00	72	42 - 159

Sample: 252561 - East Wall EW-1, 8'

Laboratory:	Midland						
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D			Prep Method:	N/A
QC Batch:	75957	Date Analyzed:	2010-12-07			Analyzed By:	kg
Prep Batch:	65148	Sample Preparation:	2010-12-07			Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		74.5	mg/Kg	1	100	74	70 - 130

Sample: 252561 - East Wall EW-1, 8'

Laboratory:	Midland						
Analysis:	TPH GRO	Analytical Method:	S 8015 D			Prep Method:	S 5035
QC Batch:	75980	Date Analyzed:	2010-12-08			Analyzed By:	AG
Prep Batch:	65167	Sample Preparation:	2010-12-08			Prepared By:	AG

continued ...

Report Date: December 9, 2010
2001-11193

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South Monument Gathering Sour

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South of Monument, NM

sample 252561 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
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Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.49	mg/Kg	1	2.00	74	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.42	mg/Kg	1	2.00	71	42 - 159

Sample: 252562 - South Wall SW-1, 8'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75957	Date Analyzed:	2010-12-07	Analyzed By:	kg
Prep Batch:	65148	Sample Preparation:	2010-12-07	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		69.7	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		91.0	mg/Kg	1	100	91	70 - 130

Sample: 252562 - South Wall SW-1, 8'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	75980	Date Analyzed:	2010-12-08	Analyzed By:	AG
Prep Batch:	65167	Sample Preparation:	2010-12-08	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		3.69	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.10	mg/Kg	1	2.00	105	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.98	mg/Kg	1	2.00	99	42 - 159

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2001-11193

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South Monument Gathering Sour

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South of Monument, NM

Sample: 252563 - North Wall NW-1, 8'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	75957	Date Analyzed:	2010-12-07
Prep Batch:	65148	Sample Preparation:	2010-12-07
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		71.8	mg/Kg	1	100	72	70 - 130

Sample: 252563 - North Wall NW-1, 8'

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	75980	Date Analyzed:	2010-12-08
Prep Batch:	65167	Sample Preparation:	2010-12-08
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.44	mg/Kg	1	2.00	72	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.37	mg/Kg	1	2.00	68	42 - 159

Sample: 252564 - South Wall SW-2, 6'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	75957	Date Analyzed:	2010-12-07
Prep Batch:	65148	Sample Preparation:	2010-12-07
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

continued . . .

Report Date: December 9, 2010
2001-11193

Work Order: 10120721
South Monument Gathering Sour

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South of Monument, NM

sample continued ...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	¹	65.5	mg/Kg	1	100	66	70 - 130

Sample: 252564 - South Wall SW-2, 6'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 75980 Date Analyzed: 2010-12-08 Analyzed By: AG
Prep Batch: 65167 Sample Preparation: 2010-12-08 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.92	mg/Kg	1	2.00	96	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.83	mg/Kg	1	2.00	92	42 - 159

Sample: 252565 - West Wall WW-1, 7'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 75957 Date Analyzed: 2010-12-07 Analyzed By: kg
Prep Batch: 65148 Sample Preparation: 2010-12-07 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	²	64.9	mg/Kg	1	100	65	70 - 130

Sample: 252565 - West Wall WW-1, 7'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 75980 Date Analyzed: 2010-12-08 Analyzed By: AG
Prep Batch: 65167 Sample Preparation: 2010-12-08 Prepared By: AG

¹Surrogate out due to peak interference.

²Surrogate out due to peak interference.

Report Date: December 9, 2010
2001-11193

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South Monument Gathering Sour

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South of Monument, NM

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.66	mg/Kg	1	2.00	83	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.58	mg/Kg	1	2.00	79	42 - 159

Method Blank (1) QC Batch: 75957

QC Batch: 75957 Date Analyzed: 2010-12-07 Analyzed By: kg
Prep Batch: 65148 QC Preparation: 2010-12-07 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		81.6	mg/Kg	1	100	82	70 - 130

Method Blank (1) QC Batch: 75980

QC Batch: 75980 Date Analyzed: 2010-12-08 Analyzed By: AG
Prep Batch: 65167 QC Preparation: 2010-12-08 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.91	mg/Kg	1	2.00	96	52.4 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 75957 Date Analyzed: 2010-12-07 Analyzed By: kg
Prep Batch: 65148 QC Preparation: 2010-12-07 Prepared By: kg

Report Date: December 9, 2010
2001-11193

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South Monument Gathering Sour

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South of Monument, NM

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	178	mg/Kg	1	250	<14.6	71	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	178	mg/Kg	1	250	<14.6	71	47.5 - 144.1	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
n-Tricosane	101	98.4	mg/Kg	1	100	101	98	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 75980
Prep Batch: 65167

Date Analyzed: 2010-12-08
QC Preparation: 2010-12-08

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.3	mg/Kg	1	20.0	<1.65	86	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	17.7	mg/Kg	1	20.0	<1.65	88	69.9 - 95.4	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)	2.13	2.12	mg/Kg	1	2.00	106	106	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.99	2.00	mg/Kg	1	2.00	100	100	65.2 - 132

Matrix Spike (MS-1) Spiked Sample: 252565

QC Batch: 75957
Prep Batch: 65148

Date Analyzed: 2010-12-07
QC Preparation: 2010-12-07

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	220	mg/Kg	1	250	<14.6	88	11.7 - 152.3

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

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Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	223	mg/Kg	1	250	<14.6	89	11.7 - 152.3	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	83.8	81.7	mg/Kg	1	100	84	82	70 - 130

Matrix Spike (MS-1) Spiked Sample: 252565

QC Batch: 75980
Prep Batch: 65167

Date Analyzed: 2010-12-08
QC Preparation: 2010-12-08

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.2	mg/Kg	1	20.0	<1.65	76	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	14.8	mg/Kg	1	20.0	<1.65	74	61.8 - 114	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)	1.81	1.35	mg/Kg	1	2	90	68	50 - 162
4-Bromofluorobenzene (4-BFB)	1.86	1.41	mg/Kg	1	2	93	70	50 - 162

Standard (CCV-1)

QC Batch: 75957

Date Analyzed: 2010-12-07

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	203	81	80 - 120	2010-12-07

Standard (CCV-2)

QC Batch: 75957

Date Analyzed: 2010-12-07

Analyzed By: kg

Report Date: December 9, 2010
2001-11193

Work Order: 10120721
South Monument Gathering Sour

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South of Monument, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	207	83	80 - 120	2010-12-07

Standard (CCV-3)

QC Batch: 75957 Date Analyzed: 2010-12-07 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	241	96	80 - 120	2010-12-07

Standard (CCV-1)

QC Batch: 75980 Date Analyzed: 2010-12-08 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.02	102	80 - 120	2010-12-08

Standard (CCV-2)

QC Batch: 75980 Date Analyzed: 2010-12-08 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.06	106	80 - 120	2010-12-08

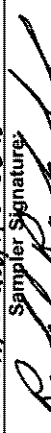
TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
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200 East Sunset Rd., Suite E
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Fax (915) 585-4944
1 (888) 588-3443

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

Company Name:	NOVA	Phone #:	
Address:	(Street, City, Zip)	Fax #:	
Contact Person:	Ron Rounsaville	E-mail:	
Invoice to:	Plains		
Project #:	SRS # 2001-11193	Project Name:	S. Mont. Graph. Sour
Project Location (including state):	Hea Co. NM	Sampler Signature:	

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						DATE	SAMPLING TIME
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE		
	Impacted Soil stockpile	3													
	Excavation														
50259	Floor F-1, 10'	1	402		X							X		12/26/10	1436
500	Floor F-2, 10'	1	~		X							X		~	1426
501	EAST Wall SWH, 8'	1	~		X							X		~	1434
502	South Wall SW-1, 8'	1	~		X							X		~	1437
503	North Wall NW-1, 8'	1	~		X							X		~	1441
504	South Wall SW-2, 6'	1	~		X							X		~	1444
505	WEST Wall WW-1, 7'	1	~		X							X		~	1447

Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:	INST
<i>[Signature]</i>	12/6/70	11:55	<i>[Signature]</i>	TA	12-7-10	11:55	OBS 3.5 COR 3.5
Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:	INST
							OBS COR
Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:	INST
							OBS COR

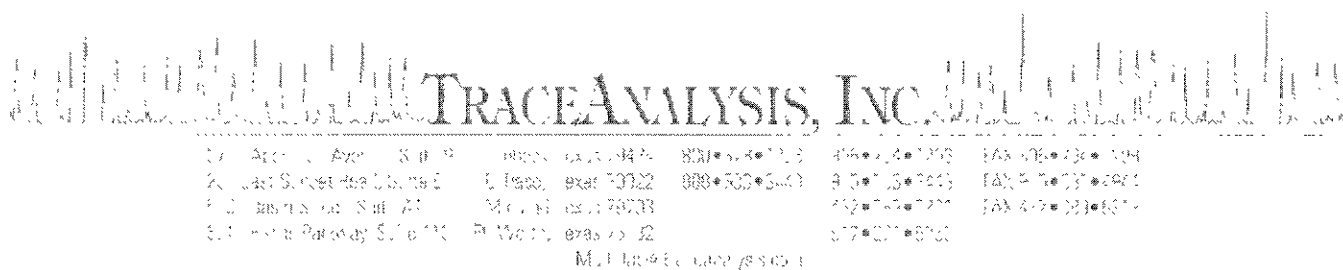
[illegible]

LAB USE ONLY	Intact ☒ Y / ☐ N	Headspace ☐ Y / ☒ N / ☐ NA	☐ Dry Weight Basis Required ☐ TRRP Report Required ☐ Check if Special Reporting Limits Are Needed
	REMARKS: * All tests Midland		
Log-in-Review _____			

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

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Carrier # Carry in



Certifications

WBENC: 237019

HUB: 1752439743100-86536
 NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
 LELAP-02003
 Kansas E-10317

El Paso: T104704221-08-TX
 LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ron Rounsaville
 Nova Safety & Environmental
 2057 Commerce St.
 Midland, TX, 79703

Report Date: December 9, 2010

Work Order: 10120720



Project Location: South of Monument, NM
 Project Name: South Monument Gathering Sour
 Project Number: 2001-11193

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
252558	SW Cor., N Wall-2B, 20'	soil	2010-12-06	14:20	2010-12-07

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.

This report consists of a total of 7 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-12-07 and assigned to work order 10120720. Samples for work order 10120720 were received intact at a temperature of 3.5 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	65148	2010-12-07 at 14:14	75957	2010-12-07 at 14:14
TPH GRO	S 8015 D	65167	2010-12-08 at 08:30	75980	2010-12-08 at 10:07

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 10120720 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: 252558 - SW Cor., N Wall-2B, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-07	Analyzed By:	kg
QC Batch:	75957	Sample Preparation:	2010-12-07	Prepared By:	kg
Prep Batch:	65148				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		71.8	mg/Kg	1	100	72	70 - 130

Sample: 252558 - SW Cor., N Wall-2B, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-12-08	Analyzed By:	AG
QC Batch:	75980	Sample Preparation:	2010-12-08	Prepared By:	AG
Prep Batch:	65167				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.23	mg/Kg	1	2.00	62	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.14	mg/Kg	1	2.00	57	42 - 159

Method Blank (1) QC Batch: 75957

QC Batch:	75957	Date Analyzed:	2010-12-07	Analyzed By:	kg
Prep Batch:	65148	QC Preparation:	2010-12-07	Prepared By:	kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		81.6	mg/Kg	1	100	82	70 - 130

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2001-11193

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Method Blank (1) QC Batch: 75980

QC Batch: 75980
Prep Batch: 65167

Date Analyzed: 2010-12-08
QC Preparation: 2010-12-08

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.91	mg/Kg	1	2.00	96	52.4 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 75957
Prep Batch: 65148

Date Analyzed: 2010-12-07
QC Preparation: 2010-12-07

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	178	mg/Kg	1	250	<14.6	71	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	178	mg/Kg	1	250	<14.6	71	47.5 - 144.1	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
n-Tricosane	101	98.4	mg/Kg	1	100	101	98	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 75980
Prep Batch: 65167

Date Analyzed: 2010-12-08
QC Preparation: 2010-12-08

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.3	mg/Kg	1	20.0	<1.65	86	69.9 - 95.4

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

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Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	17.7	mg/Kg	1	20.0	<1.65	88	69.9 - 95.4	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)	2.13	2.12	mg/Kg	1	2.00	106	106	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.99	2.00	mg/Kg	1	2.00	100	100	65.2 - 132

Matrix Spike (MS-1) Spiked Sample: 252565

QC Batch: 75957 Date Analyzed: 2010-12-07 Analyzed By: kg
Prep Batch: 65148 QC Preparation: 2010-12-07 Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	220	mg/Kg	1	250	<14.6	88	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	223	mg/Kg	1	250	<14.6	89	11.7 - 152.3	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	83.8	81.7	mg/Kg	1	100	84	82	70 - 130

Matrix Spike (MS-1) Spiked Sample: 252565

QC Batch: 75980 Date Analyzed: 2010-12-08 Analyzed By: AG
Prep Batch: 65167 QC Preparation: 2010-12-08 Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.2	mg/Kg	1	20.0	<1.65	76	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	14.8	mg/Kg	1	20.0	<1.65	74	61.8 - 114	3	20

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

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Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.81	1.35	mg/Kg	1	2	90	68	50 - 162
4-Bromofluorobenzene (4-BFB)	1.86	1.41	mg/Kg	1	2	93	70	50 - 162

Standard (CCV-1)

QC Batch: 75957 Date Analyzed: 2010-12-07 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	203	81	80 - 120	2010-12-07

Standard (CCV-2)

QC Batch: 75957 Date Analyzed: 2010-12-07 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	207	83	80 - 120	2010-12-07

Standard (CCV-1)

QC Batch: 75980 Date Analyzed: 2010-12-08 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.02	102	80 - 120	2010-12-08

Standard (CCV-2)

QC Batch: 75980 Date Analyzed: 2010-12-08 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.06	106	80 - 120	2010-12-08

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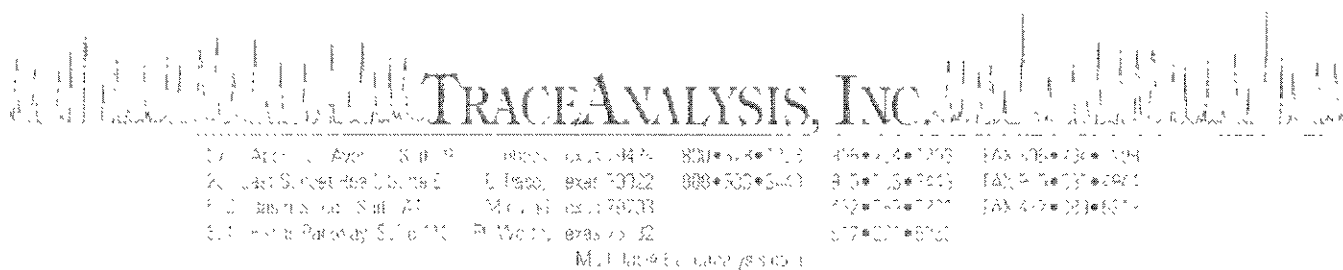
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Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: December 22, 2010

Work Order: 10121505



Project Location: South of Monument, NM
Project Name: South Monument Gathering Sour
Project Number: 2001-11193

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
253352	MFP, SP-2	soil	2010-12-14	13:10	2010-12-14
253353	MFP, SP-3	soil	2010-12-14	13:15	2010-12-14

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.

This report consists of a total of 8 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-12-14 and assigned to work order 10121505. Samples for work order 10121505 were received intact at a temperature of 4.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	65481	2010-12-17 at 10:00	76361	2010-12-17 at 15:55
TPH GRO	S 8015 D	65453	2010-12-17 at 10:08	76319	2010-12-17 at 10:08

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 10121505 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: 253352 - MFP, SP-2

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-17	Analyzed By:	AG
QC Batch:	76361	Sample Preparation:	2010-12-17	Prepared By:	AG
Prep Batch:	65481				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	¹	169	mg/Kg	1	100	169	70 - 130

Sample: 253352 - MFP, SP-2

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-12-17	Analyzed By:	ME
QC Batch:	76319	Sample Preparation:	2010-12-17	Prepared By:	ME
Prep Batch:	65453				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.41	mg/Kg	1	2.00	120	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.38	mg/Kg	1	2.00	119	42 - 159

Sample: 253353 - MFP, SP-3

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-17	Analyzed By:	AG
QC Batch:	76361	Sample Preparation:	2010-12-17	Prepared By:	AG
Prep Batch:	65481				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

¹High surrogate recovery. Sample non-detect, result bias high.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		107	mg/Kg	1	100	107	70 - 130

Sample: 253353 - MFP, SP-3

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 76319

Prep Batch: 65453

Analytical Method: S 8015 D

Date Analyzed: 2010-12-17

Sample Preparation: 2010-12-17

Prep Method: S 5035

Analyzed By: ME

Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.57	mg/Kg	1	2.00	128	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.52	mg/Kg	1	2.00	126	42 - 159

Method Blank (1) QC Batch: 76319

QC Batch: 76319

Prep Batch: 65453

Date Analyzed: 2010-12-17

QC Preparation: 2010-12-17

Analyzed By: ME

Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.87	mg/Kg	1	2.00	94	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.78	mg/Kg	1	2.00	89	52.4 - 130

Method Blank (1) QC Batch: 76361

QC Batch: 76361

Prep Batch: 65481

Date Analyzed: 2010-12-17

QC Preparation: 2010-12-17

Analyzed By: AG

Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		100	mg/Kg	1	100	100	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 76319 Date Analyzed: 2010-12-17 Analyzed By: ME
Prep Batch: 65453 QC Preparation: 2010-12-17 Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.6	mg/Kg	1	20.0	<1.65	78	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.0	mg/Kg	1	20.0	<1.65	80	69.9 - 95.4	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)	1.84	1.88	mg/Kg	1	2.00	92	94	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.84	1.89	mg/Kg	1	2.00	92	94	65.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 76361 Date Analyzed: 2010-12-17 Analyzed By: AG
Prep Batch: 65481 QC Preparation: 2010-12-17 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	225	mg/Kg	1	250	<14.6	90	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	206	mg/Kg	1	250	<14.6	82	47.5 - 144.1	9	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	126	104	mg/Kg	1	100	126	104	70 - 130

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Matrix Spike (MS-1) Spiked Sample: 253353

QC Batch: 76319 Date Analyzed: 2010-12-17 Analyzed By: ME
Prep Batch: 65453 QC Preparation: 2010-12-17 Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.5	mg/Kg	1	20.0	<1.65	78	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.4	mg/Kg	1	20.0	<1.65	82	61.8 - 114	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)	2.35	2.40	mg/Kg	1	2	118	120	50 - 162
4-Bromofluorobenzene (4-BFB)	2.41	2.46	mg/Kg	1	2	120	123	50 - 162

Matrix Spike (MS-1) Spiked Sample: 253353

QC Batch: 76361 Date Analyzed: 2010-12-17 Analyzed By: AG
Prep Batch: 65481 QC Preparation: 2010-12-17 Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	200	mg/Kg	1	250	<14.6	80	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	195	mg/Kg	1	250	<14.6	78	11.7 - 152.3	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
n-Tricosane	121	122	mg/Kg	1	100	121	122	70 - 130

Standard (CCV-1)

QC Batch: 76319 Date Analyzed: 2010-12-17 Analyzed By: ME

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.05	105	80 - 120	2010-12-17

Standard (CCV-2)

QC Batch: 76319 Date Analyzed: 2010-12-17 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.909	91	80 - 120	2010-12-17

Standard (CCV-1)

QC Batch: 76361 Date Analyzed: 2010-12-17 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	217	87	80 - 120	2010-12-17

Standard (CCV-2)

QC Batch: 76361 Date Analyzed: 2010-12-17 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	251	100	80 - 120	2010-12-17

Standard (CCV-3)

QC Batch: 76361 Date Analyzed: 2010-12-17 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	234	94	80 - 120	2010-12-17

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Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-12-14 and assigned to work order 10121504. Samples for work order 10121504 were received intact at a temperature of 4.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	65481	2010-12-17 at 10:00	76361	2010-12-17 at 15:55
TPH GRO	S 8015 D	65400	2010-12-16 at 09:14	76252	2010-12-16 at 09:14
TPH GRO	S 8015 D	65453	2010-12-17 at 10:08	76319	2010-12-17 at 10:08

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 10121504 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.

Report Date: December 22, 2010
2001-11193

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Analytical Report

Sample: 253350 - N Stockpile-C

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-17	Analyzed By:	AG
QC Batch:	76361	Sample Preparation:	2010-12-17	Prepared By:	AG
Prep Batch:	65481				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		92.6	mg/Kg	1	100	93	70 - 130

Sample: 253350 - N Stockpile-C

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-12-16	Analyzed By:	ME
QC Batch:	76252	Sample Preparation:	2010-12-16	Prepared By:	ME
Prep Batch:	65400				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.46	mg/Kg	1	2.00	123	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.42	mg/Kg	1	2.00	121	42 - 159

Sample: 253351 - N Stockpile-D

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-17	Analyzed By:	AG
QC Batch:	76361	Sample Preparation:	2010-12-17	Prepared By:	AG
Prep Batch:	65481				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	¹	156	mg/Kg	1	100	156	70 - 130

Sample: 253351 - N Stockpile-D

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 76319 Date Analyzed: 2010-12-17 Analyzed By: ME
Prep Batch: 65453 Sample Preparation: 2010-12-17 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.42	mg/Kg	1	2.00	121	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.39	mg/Kg	1	2.00	120	42 - 159

Method Blank (1) QC Batch: 76252

QC Batch: 76252 Date Analyzed: 2010-12-16 Analyzed By: ME
Prep Batch: 65400 QC Preparation: 2010-12-16 Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.74	mg/Kg	1	2.00	87	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.70	mg/Kg	1	2.00	85	52.4 - 130

Method Blank (1) QC Batch: 76319

QC Batch: 76319 Date Analyzed: 2010-12-17 Analyzed By: ME
Prep Batch: 65453 QC Preparation: 2010-12-17 Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

¹High surrogate recovery. Sample non-detect, result bias high.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.87	mg/Kg	1	2.00	94	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.78	mg/Kg	1	2.00	89	52.4 - 130

Method Blank (1) QC Batch: 76361

QC Batch: 76361 Date Analyzed: 2010-12-17 Analyzed By: AG
Prep Batch: 65481 QC Preparation: 2010-12-17 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		100	mg/Kg	1	100	100	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 76252 Date Analyzed: 2010-12-16 Analyzed By: ME
Prep Batch: 65400 QC Preparation: 2010-12-16 Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.9	mg/Kg	1	20.0	<1.65	90	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	17.9	mg/Kg	1	20.0	<1.65	90	69.9 - 95.4	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
Trifluorotoluene (TFT)	1.98	1.60	mg/Kg	1	2.00	99	80	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.98	1.64	mg/Kg	1	2.00	99	82	65.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 76319 Date Analyzed: 2010-12-17 Analyzed By: ME
Prep Batch: 65453 QC Preparation: 2010-12-17 Prepared By: ME

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.6	mg/Kg	1	20.0	<1.65	78	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.0	mg/Kg	1	20.0	<1.65	80	69.9 - 95.4	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)	1.84	1.88	mg/Kg	1	2.00	92	94	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.84	1.89	mg/Kg	1	2.00	92	94	65.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 76361
Prep Batch: 65481

Date Analyzed: 2010-12-17
QC Preparation: 2010-12-17

Analyzed By: AG
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	225	mg/Kg	1	250	<14.6	90	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	206	mg/Kg	1	250	<14.6	82	47.5 - 144.1	9	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	126	104	mg/Kg	1	100	126	104	70 - 130

Matrix Spike (MS-1) Spiked Sample: 253344

QC Batch: 76252
Prep Batch: 65400

Date Analyzed: 2010-12-16
QC Preparation: 2010-12-16

Analyzed By: ME
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.3	mg/Kg	1	20.0	<1.65	86	61.8 - 114

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

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Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	19.0	mg/Kg	1	20.0	<1.65	95	61.8 - 114	9	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.17	2.30	mg/Kg	1	2	108	115	50 - 162
4-Bromofluorobenzene (4-BFB)	2.35	2.47	mg/Kg	1	2	118	124	50 - 162

Matrix Spike (MS-1) Spiked Sample: 253353

QC Batch: 76319
Prep Batch: 65453

Date Analyzed: 2010-12-17
QC Preparation: 2010-12-17

Analyzed By: ME
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.5	mg/Kg	1	20.0	<1.65	78	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.4	mg/Kg	1	20.0	<1.65	82	61.8 - 114	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)	2.35	2.40	mg/Kg	1	2	118	120	50 - 162
4-Bromofluorobenzene (4-BFB)	2.41	2.46	mg/Kg	1	2	120	123	50 - 162

Matrix Spike (MS-1) Spiked Sample: 253353

QC Batch: 76361
Prep Batch: 65481

Date Analyzed: 2010-12-17
QC Preparation: 2010-12-17

Analyzed By: AG
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	200	mg/Kg	1	250	<14.6	80	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	195	mg/Kg	1	250	<14.6	78	11.7 - 152.3	2	20

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

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Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	121	122	mg/Kg	1	100	121	122	70 - 130

Standard (CCV-2)

QC Batch: 76252 Date Analyzed: 2010-12-16 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.975	98	80 - 120	2010-12-16

Standard (CCV-3)

QC Batch: 76252 Date Analyzed: 2010-12-16 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.00	100	80 - 120	2010-12-16

Standard (CCV-1)

QC Batch: 76319 Date Analyzed: 2010-12-17 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.05	105	80 - 120	2010-12-17

Standard (CCV-2)

QC Batch: 76319 Date Analyzed: 2010-12-17 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.909	91	80 - 120	2010-12-17

Standard (CCV-1)

QC Batch: 76361 Date Analyzed: 2010-12-17 Analyzed By: AG

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	217	87	80 - 120	2010-12-17

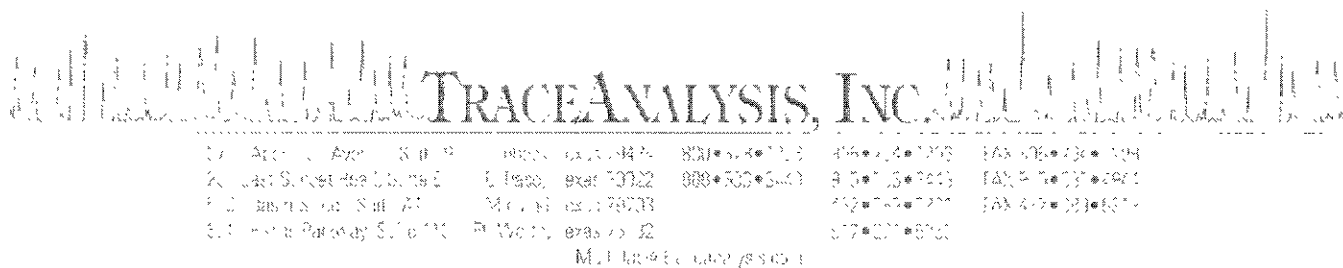
Standard (CCV-2)

QC Batch: 76361

Date Analyzed: 2010-12-17

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	251	100	80 - 120	2010-12-17



Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: December 22, 2010

Work Order: 10121502



Project Location: South of Monument, NM
Project Name: South Monument Gathering Sour
Project Number: 2001-11193

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
253343	SW Corner, FLR-1, 15'	soil	2010-12-14	12:35	2010-12-14
253344	SW Corner, FLR-2, 20'	soil	2010-12-14	12:40	2010-12-14

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.

This report consists of a total of 8 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-12-14 and assigned to work order 10121502. Samples for work order 10121502 were received intact at a temperature of 4.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	65481	2010-12-17 at 10:00	76361	2010-12-17 at 15:55
TPH GRO	S 8015 D	65400	2010-12-16 at 09:14	76252	2010-12-16 at 09:14

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 10121502 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: 253343 - SW Corner, FLR-1, 15'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-17	Analyzed By:	AG
QC Batch:	76361	Sample Preparation:	2010-12-17	Prepared By:	AG
Prep Batch:	65481				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		703	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	¹	205	mg/Kg	1	100	205	70 - 130

Sample: 253343 - SW Corner, FLR-1, 15'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-12-16	Analyzed By:	ME
QC Batch:	76252	Sample Preparation:	2010-12-16	Prepared By:	ME
Prep Batch:	65400				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		10.5	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.43	mg/Kg	1	2.00	122	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.42	mg/Kg	1	2.00	121	42 - 159

Sample: 253344 - SW Corner, FLR-2, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-17	Analyzed By:	AG
QC Batch:	76361	Sample Preparation:	2010-12-17	Prepared By:	AG
Prep Batch:	65481				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		122	mg/Kg	1	50.0

¹High surrogate recovery due to peak interference.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		119	mg/Kg	1	100	119	70 - 130

Sample: 253344 - SW Corner, FLR-2, 20'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 76252 Date Analyzed: 2010-12-16 Analyzed By: ME
Prep Batch: 65400 Sample Preparation: 2010-12-16 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.08	mg/Kg	1	2.00	104	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.07	mg/Kg	1	2.00	104	42 - 159

Method Blank (1) QC Batch: 76252

QC Batch: 76252 Date Analyzed: 2010-12-16 Analyzed By: ME
Prep Batch: 65400 QC Preparation: 2010-12-16 Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.74	mg/Kg	1	2.00	87	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.70	mg/Kg	1	2.00	85	52.4 - 130

Method Blank (1) QC Batch: 76361

QC Batch: 76361 Date Analyzed: 2010-12-17 Analyzed By: AG
Prep Batch: 65481 QC Preparation: 2010-12-17 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		100	mg/Kg	1	100	100	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 76252 Date Analyzed: 2010-12-16 Analyzed By: ME
Prep Batch: 65400 QC Preparation: 2010-12-16 Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.9	mg/Kg	1	20.0	<1.65	90	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	17.9	mg/Kg	1	20.0	<1.65	90	69.9 - 95.4	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
Trifluorotoluene (TFT)	1.98	1.60	mg/Kg	1	2.00	99	80	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.98	1.64	mg/Kg	1	2.00	99	82	65.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 76361 Date Analyzed: 2010-12-17 Analyzed By: AG
Prep Batch: 65481 QC Preparation: 2010-12-17 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	225	mg/Kg	1	250	<14.6	90	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	206	mg/Kg	1	250	<14.6	82	47.5 - 144.1	9	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	126	104	mg/Kg	1	100	126	104	70 - 130

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Matrix Spike (MS-1) Spiked Sample: 253344

QC Batch: 76252
Prep Batch: 65400

Date Analyzed: 2010-12-16
QC Preparation: 2010-12-16

Analyzed By: ME
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.3	mg/Kg	1	20.0	<1.65	86	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	19.0	mg/Kg	1	20.0	<1.65	95	61.8 - 114	9	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.17	2.30	mg/Kg	1	2	108	115	50 - 162
4-Bromofluorobenzene (4-BFB)	2.35	2.47	mg/Kg	1	2	118	124	50 - 162

Matrix Spike (MS-1) Spiked Sample: 253353

QC Batch: 76361
Prep Batch: 65481

Date Analyzed: 2010-12-17
QC Preparation: 2010-12-17

Analyzed By: AG
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	200	mg/Kg	1	250	<14.6	80	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	195	mg/Kg	1	250	<14.6	78	11.7 - 152.3	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
n-Tricosane	121	122	mg/Kg	1	100	121	122	70 - 130

Standard (CCV-2)

QC Batch: 76252

Date Analyzed: 2010-12-16

Analyzed By: ME

Report Date: December 22, 2010
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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.975	98	80 - 120	2010-12-16

Standard (CCV-3)

QC Batch: 76252 Date Analyzed: 2010-12-16 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.00	100	80 - 120	2010-12-16

Standard (CCV-1)

QC Batch: 76361 Date Analyzed: 2010-12-17 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	217	87	80 - 120	2010-12-17

Standard (CCV-2)

QC Batch: 76361 Date Analyzed: 2010-12-17 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	251	100	80 - 120	2010-12-17

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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
Fax (915) 585-4944
1 (888) 588-3443

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

Company Name:	NOVA	Phone #:	
Address:	(Street, City, Zip)	Fax #:	
Contact Person:	Ron Rounsaville	E-mail:	
Invoice to:			
(If different from above)	PLAINS		
Project #:	SRS # 2001-11193	Project Name:	S. MONT. GATH, Sour
Project Location (including state):	LEA Co. NM	Sampler Signature:	<i>Robert Rounsaville</i>

[illegible]

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST
<i>[Signature]</i>		12-14-10	1620	<i>[Signature]</i>	Trace	12/14/10	1620	OBS 4.0
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	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

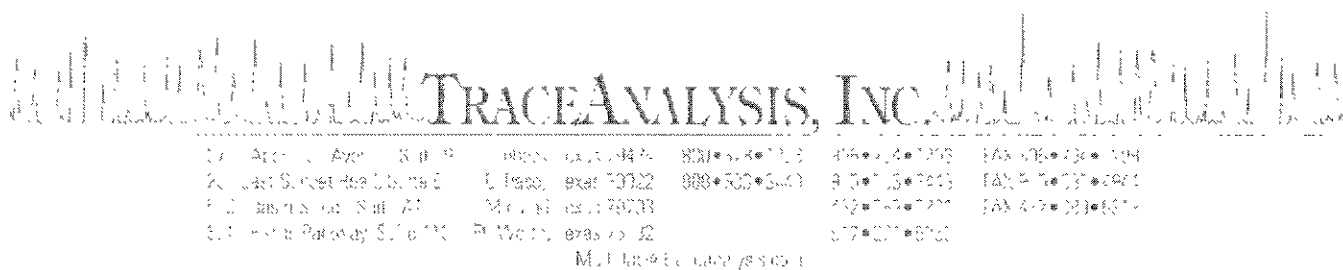
ANALYSIS REQUEST (Circle or Specify Method No.)		Hold
MTBE 8021 / 602 / 8260 / 624		
BTEX 8021 / 602 / 8260 / 624		
TPH 418.1 / TX1005 / TX1005 Ext(C35)	X	
TPH 8015 GRO / DRO TVHC	X	
PAH 8270 / 625		
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7		
TCLP Metals Ag As Ba Cd Cr Pb Se Hg		
TCLP Volatiles		
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, F1, SO4, NO3, NO2, Alkalinity		
Na, Ca, Mg, K, TDS, EC		
Turn Around Time if different from standard		

LAB USE ONLY	REMARKS:
	Intact <u>Q</u> <u>N</u> Headspace <u>Y</u> <u>N</u> <u>NA</u> ☐ Dry Weight Basis Required ☐ TRRP Report Required ☐ Check If Special Reporting Limits Are Needed Log-in-Review _____

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

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Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: December 28, 2010

Work Order: 10122225



Project Location: South of Monument, NM
Project Name: South Monument Gathering Sour
Project Number: 2001-11193

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
254059	SW COR, FLR-1B, 16'	soil	2010-12-22	12:10	2010-12-22
254060	SW. COR, FLR-2B, 21'	soil	2010-12-22	12:15	2010-12-22

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.

This report consists of a total of 8 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2010-12-22 and assigned to work order 10122225. Samples for work order 10122225 were received intact at a temperature of 18.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	65588	2010-12-23 at 11:11	76494	2010-12-23 at 11:11
TPH GRO	S 8015 D	65569	2010-12-23 at 14:56	76473	2010-12-23 at 23:39

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 10122225 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.

Report Date: December 28, 2010
2001-11193

Work Order: 10122225
South Monument Gathering Sour

Page Number: 4 of 8
South of Monument, NM

Analytical Report

Sample: 254059 - SW COR, FLR-1B, 16'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-23	Analyzed By:	kg
QC Batch:	76494	Sample Preparation:	2010-12-23	Prepared By:	kg
Prep Batch:	65588				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		111	mg/Kg	1	100	111	70 - 130

Sample: 254059 - SW COR, FLR-1B, 16'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-12-23	Analyzed By:	ME
QC Batch:	76473	Sample Preparation:	2010-12-23	Prepared By:	ME
Prep Batch:	65569				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.37	mg/Kg	1	2.00	118	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.34	mg/Kg	1	2.00	117	42 - 159

Sample: 254060 - SW. COR, FLR-2B, 21'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-12-23	Analyzed By:	kg
QC Batch:	76494	Sample Preparation:	2010-12-23	Prepared By:	kg
Prep Batch:	65588				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Report Date: December 28, 2010
2001-11193

Work Order: 10122225
South Monument Gathering Sour

Page Number: 5 of 8
South of Monument, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	¹	207	mg/Kg	1	100	207	70 - 130

Sample: 254060 - SW. COR, FLR-2B, 21'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 76473 Date Analyzed: 2010-12-23 Analyzed By: ME
Prep Batch: 65569 Sample Preparation: 2010-12-23 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.40	mg/Kg	1	2.00	120	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.33	mg/Kg	1	2.00	116	42 - 159

Method Blank (1) QC Batch: 76473

QC Batch: 76473 Date Analyzed: 2010-12-23 Analyzed By: ME
Prep Batch: 65569 QC Preparation: 2010-12-23 Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.88	mg/Kg	1	2.00	94	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.84	mg/Kg	1	2.00	92	52.4 - 130

Method Blank (1) QC Batch: 76494

QC Batch: 76494 Date Analyzed: 2010-12-23 Analyzed By: kg
Prep Batch: 65588 QC Preparation: 2010-12-23 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

¹High surrogate recovery. Sample non-detect, result bias high.

Report Date: December 28, 2010
2001-11193

Work Order: 10122225
South Monument Gathering Sour

Page Number: 6 of 8
South of Monument, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		104	mg/Kg	1	100	104	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 76473 Date Analyzed: 2010-12-23 Analyzed By: ME
Prep Batch: 65569 QC Preparation: 2010-12-23 Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.7	mg/Kg	1	20.0	<1.65	78	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.9	mg/Kg	1	20.0	<1.65	80	69.9 - 95.4	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)	1.81	1.84	mg/Kg	1	2.00	90	92	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.88	1.88	mg/Kg	1	2.00	94	94	65.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 76494 Date Analyzed: 2010-12-23 Analyzed By: kg
Prep Batch: 65588 QC Preparation: 2010-12-23 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	236	mg/Kg	1	250	<14.6	94	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	236	mg/Kg	1	250	<14.6	94	47.5 - 144.1	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
n-Tricosane	118	114	mg/Kg	1	100	118	114	70 - 130

Report Date: December 28, 2010
2001-11193

Work Order: 10122225
South Monument Gathering Sour

Page Number: 7 of 8
South of Monument, NM

Matrix Spike (MS-1) Spiked Sample: 254060

QC Batch: 76473 Date Analyzed: 2010-12-23 Analyzed By: ME
Prep Batch: 65569 QC Preparation: 2010-12-23 Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.0	mg/Kg	1	20.0	<1.65	75	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.9	mg/Kg	1	20.0	<1.65	80	61.8 - 114	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)	2.33	2.32	mg/Kg	1	2	116	116	50 - 162
4-Bromofluorobenzene (4-BFB)	2.47	2.49	mg/Kg	1	2	124	124	50 - 162

Matrix Spike (MS-1) Spiked Sample: 254060

QC Batch: 76494 Date Analyzed: 2010-12-23 Analyzed By: kg
Prep Batch: 65588 QC Preparation: 2010-12-23 Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	218	mg/Kg	1	250	<14.6	87	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	236	mg/Kg	1	250	<14.6	94	11.7 - 152.3	8	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	121	128	mg/Kg	1	100	121	128	70 - 130

Standard (CCV-1)

QC Batch: 76473 Date Analyzed: 2010-12-23 Analyzed By: ME

Report Date: December 28, 2010
2001-11193

Work Order: 10122225
South Monument Gathering Sour

Page Number: 8 of 8
South of Monument, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.960	96	80 - 120	2010-12-23

Standard (CCV-2)

QC Batch: 76473

Date Analyzed: 2010-12-23

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.872	87	80 - 120	2010-12-23

Standard (CCV-2)

QC Batch: 76494

Date Analyzed: 2010-12-23

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	255	102	80 - 120	2010-12-23

Standard (CCV-3)

QC Batch: 76494

Date Analyzed: 2010-12-23

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	214	86	80 - 120	2010-12-23

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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1 (800) 378-1296

200 East Sunset Rd., Suite E
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1 (888) 588-3443

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

Company Name:	NOVA		Phone #:	
Address:	(Street, City, Zip)		Fax #:	
Contact Person:	Ron Rounsaville		E-mail:	
Invoice to:				
(If different from above)	PLAINS			
Project #:	SRS # 2001-11193	Project Name:	S. MONT. GATH. SOAR	
Project Location (including state):	LEA CO. NM.		Sampler Signature: <i>Ron Rounsaville</i>	

ANALYSIS REQUEST

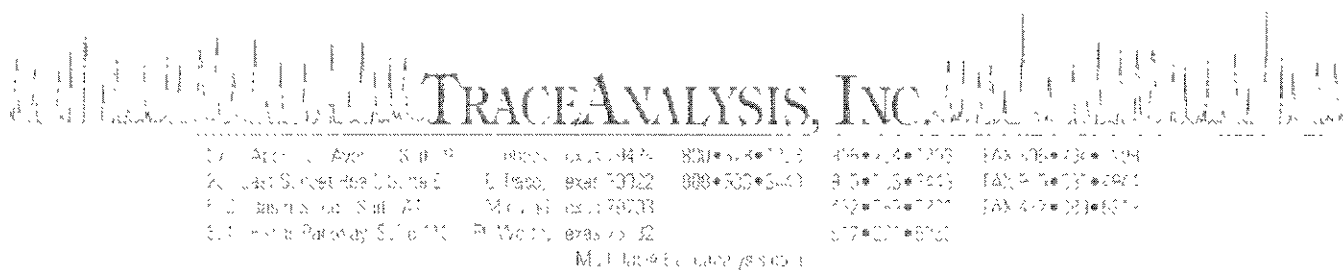
(Circle or Specify Method No.)

[illegible]

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	INST	LAB USE ONLY Initial <u>Y</u> / <u>N</u> Headspace <u>Y</u> / <u>N</u> / <u>NA</u> Log-In-Review _____	REMARKS: KAI test - Midland
								OBS 18.0 °C	OBS		
								COR	COR		
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	INST		
								OBS	OBS		
								COR	COR		
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	INST		
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WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Margie Minchew
Plains All American Houston

P.O. Box 4648
Houston, TX, 77210-4648

Report Date: February 28, 2011

Work Order: 11022104



Project Location: South of Monument, NM
Project Name: South Monument Gathering Sour
Project Number: 2001-11193

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
258059	Mid Flow Path W Wall-10, 13'	soil	2011-02-18	13:48	2011-02-18
258060	Mid Flow Path E Wall-10, 13'	soil	2011-02-18	13:45	2011-02-18
258061	Mid Flow Path Floor-10, 15'	soil	2011-02-18	13:40	2011-02-18
258062	North Flow Path FLR-1N, 3'	soil	2011-02-18	14:30	2011-02-18
258063	North Flow Path FLR-2N, 3'	soil	2011-02-18	14:33	2011-02-18
258064	North Flow Path FLR-3N, 3.5'	soil	2011-02-18	14:45	2011-02-18
258065	North Flow Path W Wall-3N, 3'	soil	2011-02-18	14:37	2011-02-18
258066	North Flow Path E Wall-3N, 3'	soil	2011-02-18	14:41	2011-02-18

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.

This report consists of a total of 15 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink that reads "Michael Abel". The signature is written in a cursive, flowing style.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2011-02-18 and assigned to work order 11022104. Samples for work order 11022104 were received intact at a temperature of 26.6 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	66719	2011-02-21 at 09:51	77782	2011-02-21 at 09:51
TPH GRO	S 8015 D	66777	2011-02-23 at 10:44	77859	2011-02-23 at 10:44
TPH GRO	S 8015 D	66842	2011-02-25 at 08:21	77929	2011-02-25 at 09:15

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 11022104 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.

Report Date: February 28, 2011
2001-11193

Work Order: 11022104
South Monument Gathering Sour

Page Number: 4 of 15
South of Monument, NM

Analytical Report

Sample: 258059 - Mid Flow Path W Wall-10, 13'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2011-02-21	Analyzed By:	kg
QC Batch:	77782	Sample Preparation:	2011-02-21	Prepared By:	kg
Prep Batch:	66719				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		84.8	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		88.5	mg/Kg	1	100	88	70 - 130

Sample: 258059 - Mid Flow Path W Wall-10, 13'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2011-02-25	Analyzed By:	ME
QC Batch:	77929	Sample Preparation:	2011-02-25	Prepared By:	ME
Prep Batch:	66842				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.27	mg/Kg	1	2.00	114	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		2.65	mg/Kg	1	2.00	132	22.2 - 160.2

Sample: 258060 - Mid Flow Path E Wall-10, 13'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2011-02-21	Analyzed By:	kg
QC Batch:	77782	Sample Preparation:	2011-02-21	Prepared By:	kg
Prep Batch:	66719				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Report Date: February 28, 2011
2001-11193

Work Order: 11022104
South Monument Gathering Sour

Page Number: 5 of 15
South of Monument, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		80.5	mg/Kg	1	100	80	70 - 130

Sample: 258060 - Mid Flow Path E Wall-10, 13'

Laboratory:	Midland						
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035		
QC Batch:	77929	Date Analyzed:	2011-02-25	Analyzed By:	ME		
Prep Batch:	66842	Sample Preparation:	2011-02-25	Prepared By:	ME		

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.24	mg/Kg	1	2.00	112	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		2.60	mg/Kg	1	2.00	130	22.2 - 160.2

Sample: 258061 - Mid Flow Path Floor-10, 15'

Laboratory:	Midland						
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A		
QC Batch:	77782	Date Analyzed:	2011-02-21	Analyzed By:	kg		
Prep Batch:	66719	Sample Preparation:	2011-02-21	Prepared By:	kg		

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		90.0	mg/Kg	1	100	90	70 - 130

Sample: 258061 - Mid Flow Path Floor-10, 15'

Laboratory:	Midland						
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035		
QC Batch:	77929	Date Analyzed:	2011-02-25	Analyzed By:	ME		
Prep Batch:	66842	Sample Preparation:	2011-02-25	Prepared By:	ME		

continued ...

Report Date: February 28, 2011
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sample 258061 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.58	mg/Kg	1	2.00	129	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		2.98	mg/Kg	1	2.00	149	22.2 - 160.2

Sample: 258062 - North Flow Path FLR-1N, 3'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 77782 Date Analyzed: 2011-02-21 Analyzed By: kg
Prep Batch: 66719 Sample Preparation: 2011-02-21 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		116	mg/Kg	1	100	116	70 - 130

Sample: 258062 - North Flow Path FLR-1N, 3'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 77929 Date Analyzed: 2011-02-25 Analyzed By: ME
Prep Batch: 66842 Sample Preparation: 2011-02-25 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.21	mg/Kg	1	2.00	110	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		2.58	mg/Kg	1	2.00	129	22.2 - 160.2

Sample: 258063 - North Flow Path FLR-2N, 3'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 77782 Date Analyzed: 2011-02-21 Analyzed By: kg
Prep Batch: 66719 Sample Preparation: 2011-02-21 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		250	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		112	mg/Kg	1	100	112	70 - 130

Sample: 258063 - North Flow Path FLR-2N, 3'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 77859 Date Analyzed: 2011-02-23 Analyzed By: ME
Prep Batch: 66777 Sample Preparation: 2011-02-23 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		227	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.52	mg/Kg	1	2.00	126	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)	¹	3.31	mg/Kg	1	2.00	166	22.2 - 160.2

Sample: 258064 - North Flow Path FLR-3N, 3.5'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 77782 Date Analyzed: 2011-02-21 Analyzed By: kg
Prep Batch: 66719 Sample Preparation: 2011-02-21 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

¹High surrogate recovery due to peak interference.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		85.0	mg/Kg	1	100	85	70 - 130

Sample: 258064 - North Flow Path FLR-3N, 3.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	77929	Date Analyzed:	2011-02-25	Analyzed By:	ME
Prep Batch:	66842	Sample Preparation:	2011-02-25	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.44	mg/Kg	1	2.00	122	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		2.83	mg/Kg	1	2.00	142	22.2 - 160.2

Sample: 258065 - North Flow Path W Wall-3N, 3'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	77782	Date Analyzed:	2011-02-21	Analyzed By:	kg
Prep Batch:	66719	Sample Preparation:	2011-02-21	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		86.1	mg/Kg	1	100	86	70 - 130

Sample: 258065 - North Flow Path W Wall-3N, 3'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	77929	Date Analyzed:	2011-02-25	Analyzed By:	ME
Prep Batch:	66842	Sample Preparation:	2011-02-25	Prepared By:	ME

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sample 258065 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.54	mg/Kg	1	2.00	127	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		2.95	mg/Kg	1	2.00	148	22.2 - 160.2

Sample: 258066 - North Flow Path E Wall-3N, 3'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 77782 Date Analyzed: 2011-02-21 Analyzed By: kg
Prep Batch: 66719 Sample Preparation: 2011-02-21 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		86.6	mg/Kg	1	100	87	70 - 130

Sample: 258066 - North Flow Path E Wall-3N, 3'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 77929 Date Analyzed: 2011-02-25 Analyzed By: ME
Prep Batch: 66842 Sample Preparation: 2011-02-25 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.40	mg/Kg	1	2.00	120	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		2.78	mg/Kg	1	2.00	139	22.2 - 160.2

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Method Blank (1) QC Batch: 77782

QC Batch: 77782 Date Analyzed: 2011-02-21 Analyzed By: kg
Prep Batch: 66719 QC Preparation: 2011-02-21 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<15.7	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		106	mg/Kg	1	100	106	70 - 130

Method Blank (1) QC Batch: 77859

QC Batch: 77859 Date Analyzed: 2011-02-23 Analyzed By: ME
Prep Batch: 66777 QC Preparation: 2011-02-23 Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<0.753	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.97	mg/Kg	1	2.00	98	74.6 - 127.8
4-Bromofluorobenzene (4-BFB)		2.09	mg/Kg	1	2.00	104	32.9 - 129.8

Method Blank (1) QC Batch: 77929

QC Batch: 77929 Date Analyzed: 2011-02-25 Analyzed By: ME
Prep Batch: 66842 QC Preparation: 2011-02-25 Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<0.753	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.92	mg/Kg	1	2.00	96	74.6 - 127.8
4-Bromofluorobenzene (4-BFB)		2.22	mg/Kg	1	2.00	111	32.9 - 129.8

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Laboratory Control Spike (LCS-1)

QC Batch: 77782 Date Analyzed: 2011-02-21 Analyzed By: kg
Prep Batch: 66719 QC Preparation: 2011-02-21 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	213	mg/Kg	1	250	<15.7	85	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	231	mg/Kg	1	250	<15.7	92	47.5 - 144.1	8	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	102	126	mg/Kg	1	100	102	126	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 77859 Date Analyzed: 2011-02-23 Analyzed By: ME
Prep Batch: 66777 QC Preparation: 2011-02-23 Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.6	mg/Kg	1	20.0	<0.753	78	61.8 - 97

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.0	mg/Kg	1	20.0	<0.753	80	61.8 - 97	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)	1.98	2.02	mg/Kg	1	2.00	99	101	74.6 - 124
4-Bromofluorobenzene (4-BFB)	2.20	2.24	mg/Kg	1	2.00	110	112	53.9 - 121.1

Laboratory Control Spike (LCS-1)

QC Batch: 77929 Date Analyzed: 2011-02-25 Analyzed By: ME
Prep Batch: 66842 QC Preparation: 2011-02-25 Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.0	mg/Kg	1	20.0	<0.753	70	61.8 - 97

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.1	mg/Kg	1	20.0	<0.753	76	61.8 - 97	8	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.82	1.84	mg/Kg	1	2.00	91	92	74.6 - 124
4-Bromofluorobenzene (4-BFB)	2.17	2.20	mg/Kg	1	2.00	108	110	53.9 - 121.1

Matrix Spike (MS-1) Spiked Sample: 258066

QC Batch: 77782 Date Analyzed: 2011-02-21 Analyzed By: kg
Prep Batch: 66719 QC Preparation: 2011-02-21 Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	221	mg/Kg	1	250	<15.7	88	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	227	mg/Kg	1	250	<15.7	91	11.7 - 152.3	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	94.4	97.5	mg/Kg	1	100	94	98	70 - 130

Matrix Spike (MS-1) Spiked Sample: 258063

QC Batch: 77859 Date Analyzed: 2011-02-23 Analyzed By: ME
Prep Batch: 66777 QC Preparation: 2011-02-23 Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	² 214	mg/Kg	1	20.0	214.043	0	63 - 108.5

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

²Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	³ 238	mg/Kg	1	20.0	214.043	56	63 - 108.5	11	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.53	2.50	mg/Kg	1	2	126	125	54.1 - 154.3
4-Bromofluorobenzene (4-BFB)	3.13	3.20	mg/Kg	1	2	156	160	41.9 - 162.8

Matrix Spike (MS-1) Spiked Sample: 258253

QC Batch: 77929 Date Analyzed: 2011-02-25 Analyzed By: ME
Prep Batch: 66842 QC Preparation: 2011-02-25 Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.6	mg/Kg	1	20.0	<0.753	73	63 - 108.5

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.0	mg/Kg	1	20.0	<0.753	80	63 - 108.5	9	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.46	2.53	mg/Kg	1	2	123	126	54.1 - 154.3
4-Bromofluorobenzene (4-BFB)	2.99	3.09	mg/Kg	1	2	150	154	41.9 - 162.8

Standard (CCV-1)

QC Batch: 77782 Date Analyzed: 2011-02-21 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	219	88	80 - 120	2011-02-21

Standard (CCV-2)

QC Batch: 77782 Date Analyzed: 2011-02-21 Analyzed By: kg

³MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	287	115	80 - 120	2011-02-21

Standard (CCV-3)

QC Batch: 77782 Date Analyzed: 2011-02-21 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	248	99	80 - 120	2011-02-21

Standard (CCV-2)

QC Batch: 77859 Date Analyzed: 2011-02-23 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.989	99	80 - 120	2011-02-23

Standard (CCV-3)

QC Batch: 77859 Date Analyzed: 2011-02-23 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.12	112	80 - 120	2011-02-23

Standard (CCV-1)

QC Batch: 77929 Date Analyzed: 2011-02-25 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.909	91	80 - 120	2011-02-25

Standard (CCV-2)

QC Batch: 77929 Date Analyzed: 2011-02-25 Analyzed By: ME

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.872	87	80 - 120	2011-02-25

Standard (CCV-3)

QC Batch: 77929

Date Analyzed: 2011-02-25

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.913	91	80 - 120	2011-02-25



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Certifications

WBENC: 237019

HUB: 1752439743100-86536

DBE: VN 20657

NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX

El Paso: T104704221-08-TX

Midland: T104704392-08-TX

LELAP-02003

LELAP-02002

Kansas E-10317

Analytical and Quality Control Report

Nova Safety & Environmental
 2057 Commerce St.
 Midland, TX. 79703

Report Date: March 16, 2011

Work Order: 11022129



Project Location: New Mexico
Project Name: South Monument Gathering Sour
Project Number: 2001-11193

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
258251	FLR-4N. 13'	Soil	2011-02-21	12:10	2011-02-21
258252	W Wall-4N. 11'	Soil	2011-02-21	12:13	2011-02-21
258253	E Wall-4N. 11'	Soil	2011-02-21	12:16	2011-02-21

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.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2011-02-21 and assigned to work order 11022129. Samples for work order 11022129 were received intact at a temperature of 4.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	67343	2011-02-22 at 15:46	79369	2011-02-22 at 15:46
TPH GRO	S 8015 D	67342	2011-02-25 at 08:21	79368	2011-02-25 at 09:42

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 11022129 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

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New Mexico

Analytical Report

Sample: 258251 - FLR-4N, 13'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2011-02-22	Analyzed By:	kg
QC Batch:	79369	Sample Preparation:	2011-02-22	Prepared By:	kg
Prep Batch:	67343				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		88.4	mg/Kg	1	100	88	70 - 130

Sample: 258251 - FLR-4N, 13'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2011-02-25	Analyzed By:	ME
QC Batch:	79368	Sample Preparation:	2011-02-25	Prepared By:	ME
Prep Batch:	67342				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.45	mg/Kg	1	2.00	122	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.85	mg/Kg	1	2.00	142	42 - 159

Sample: 258252 - W Wall-4N, 11'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2011-02-22	Analyzed By:	kg
QC Batch:	79369	Sample Preparation:	2011-02-22	Prepared By:	kg
Prep Batch:	67343				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		86.3	mg/Kg	1	100	86	70 - 130

Sample: 258252 - W Wall-4N, 11'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79368 Date Analyzed: 2011-02-25 Analyzed By: ME
Prep Batch: 67342 Sample Preparation: 2011-02-25 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.43	mg/Kg	1	2.00	122	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.81	mg/Kg	1	2.00	140	42 - 159

Sample: 258253 - E Wall-4N, 11'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 79369 Date Analyzed: 2011-02-22 Analyzed By: kg
Prep Batch: 67343 Sample Preparation: 2011-02-22 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		86.3	mg/Kg	1	100	86	70 - 130

Sample: 258253 - E Wall-4N, 11'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79368 Date Analyzed: 2011-02-25 Analyzed By: ME
Prep Batch: 67342 Sample Preparation: 2011-02-25 Prepared By: ME

continued ...

Report Date: March 16, 2011
2001-11193

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South Monument Gathering Sour

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sample 258253 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.36	mg/Kg	1	2.00	118	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.75	mg/Kg	1	2.00	138	42 - 159

Method Blank (1) QC Batch: 79368

QC Batch: 79368
Prep Batch: 67342

Date Analyzed: 2011-02-25
QC Preparation: 2011-02-25

Analyzed By: ME
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<0.753	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.92	mg/Kg	1	2.00	96	67.6 - 150
4-Bromofluorobenzene (4-BFB)		2.22	mg/Kg	1	2.00	111	52.4 - 130

Method Blank (1) QC Batch: 79369

QC Batch: 79369
Prep Batch: 67343

Date Analyzed: 2011-02-22
QC Preparation: 2011-02-22

Analyzed By: kg
Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<15.7	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		85.4	mg/Kg	1	100	85	70 - 130

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Laboratory Control Spike (LCS-1)

QC Batch: 79368
Prep Batch: 67342

Date Analyzed: 2011-02-25
QC Preparation: 2011-02-25

Analyzed By: ME
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.0	mg/Kg	1	20.0	<0.753	70	60.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.1	mg/Kg	1	20.0	<0.753	76	60.9 - 95.4	8	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.82	1.84	mg/Kg	1	2.00	91	92	61.9 - 142
4-Bromofluorobenzene (4-BFB)	2.17	2.20	mg/Kg	1	2.00	108	110	68.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 79369
Prep Batch: 67343

Date Analyzed: 2011-02-22
QC Preparation: 2011-02-22

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	220	mg/Kg	1	250	<15.7	88	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	209	mg/Kg	1	250	<15.7	84	47.5 - 144.1	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	108	104	mg/Kg	1	100	108	104	70 - 130

Matrix Spike (MS-1) Spiked Sample: 258253

QC Batch: 79368
Prep Batch: 67342

Date Analyzed: 2011-02-25
QC Preparation: 2011-02-25

Analyzed By: ME
Prepared By: ME

Report Date: March 16, 2011
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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.6	mg/Kg	1	20.0	<0.753	73	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.0	mg/Kg	1	20.0	<0.753	80	61.8 - 114	9	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.46	2.53	mg/Kg	1	2	123	126	50 - 162
4-Bromofluorobenzene (4-BFB)	2.99	3.09	mg/Kg	1	2	150	154	50 - 162

Matrix Spike (MS-1) Spiked Sample: 258253

QC Batch: 79369
Prep Batch: 67343

Date Analyzed: 2011-02-22
QC Preparation: 2011-02-22

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	189	mg/Kg	1	250	<15.7	76	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	202	mg/Kg	1	250	<15.7	81	11.7 - 152.3	7	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	96.5	97.0	mg/Kg	1	100	96	97	70 - 130

Standard (CCV-2)

QC Batch: 79368

Date Analyzed: 2011-02-25

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	0.100	0.110	110	80 - 120	2011-02-25

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Standard (CCV-3)

QC Batch: 79368

Date Analyzed: 2011-02-25

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	0.100	0.107	107	80 - 120	2011-02-25

Standard (CCV-2)

QC Batch: 79369

Date Analyzed: 2011-02-22

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	202	81	80 - 120	2011-02-22

Standard (CCV-3)

QC Batch: 79369

Date Analyzed: 2011-02-22

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	200	80	80 - 120	2011-02-22

11022209

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
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5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4844
1 (888) 588-3443

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

Company Name:	NOVA	Phone #:	
Address:	(Street, City, Zip)	Fax #:	
Contact Person:	Ran Rounsaville	E-mail:	
Invoice to:		Project Name:	
(If different from above)	PLANS		S. Mont. Gath. Sour
Project #:			Sampling Signature:
Project Location (including state):			

[illegible]

Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:	INST
[Signature]	2/21/11	1445	[Signature]	AA	2/21/11	1445	OBS 4.0 °C COR °C
Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:	INST
							OBS °C COR °C
Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:	INST
							OBS °C COR °C

[illegible]

LAB USE ONLY Intact ☒ N.	REMARKS: * All tests - Midland	☐ Dry Weight Basis Required
		☐ TRRP Report Required ☐ Check if Special Reporting Limits Are Needed
Headspace ☒ N / ☒ D		Log-in-Review _____

TRACE ANALYSIS, INC.

1701 Alameda Avenue, Suite 9 Lubbock, Texas 79424 806-764-1200 806-764-1386 Fax: 806-764-1202
 2057 Commerce St. El Paso, Texas 79902 915-645-4443 Fax: 915-645-4444
 5102 E. Loop, Suite 4 Amarillo, Texas 79102 806-432-1200 Fax: 806-432-1202
 1500 North Parkway, Suite 100 Midland, Texas 79701 409-687-6600 Fax: 409-687-6603
 E-mail: info@traceanalysis.com

Certifications

WBENC: 237019

HUB: 1752439743100-86536
 NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
 LELAP-02003
 Kansas E-10317

El Paso: T104704221-08-TX
 LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Nova Safety & Environmental
 2057 Commerce St.
 Midland, TX. 79703

Report Date: March 14, 2011

Work Order: 11030235



Project Location: South of Monument, NM
 Project Name: South Monument Gathering Sour
 Project Number: 2001-11193

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
259345	FLR-11. 20'	soil	2011-03-01	14:55	2011-03-02
259346	E. Wall-11. 17'	soil	2011-03-01	14:59	2011-03-02
259347	W. Wal-11. 17'	soil	2011-03-01	15:03	2011-03-02

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.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2011-03-02 and assigned to work order 11030235. Samples for work order 11030235 were received intact at a temperature of 3.2 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	67158	2011-03-03 at 13:18	79169	2011-03-03 at 13:18
TPH GRO	S 8015 D	67106	2011-03-08 at 09:12	79088	2011-03-08 at 09:53

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 11030235 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.

Report Date: March 14, 2011
2001-11193

Work Order: 11030235
South Monument Gathering Sour

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South of Monument, NM

Analytical Report

Sample: 259345 - FLR-11, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2011-03-03	Analyzed By:	kg
QC Batch:	79169	Sample Preparation:	2011-03-03	Prepared By:	kg
Prep Batch:	67158				

Parameter	Flag	RL		Units	Dilution	RL
		Result				
DRO		<50.0		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		87.0	mg/Kg	1	100	87	70 - 130

Sample: 259345 - FLR-11, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2011-03-08	Analyzed By:	ME
QC Batch:	79088	Sample Preparation:	2011-03-08	Prepared By:	ME
Prep Batch:	67106				

Parameter	Flag	RL		Units	Dilution	RL
		Result				
GRO		<2.00		mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.61	mg/Kg	1	2.00	130	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.25	mg/Kg	1	2.00	112	42 - 159

Sample: 259346 - E. Wall-11, 17'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2011-03-03	Analyzed By:	kg
QC Batch:	79169	Sample Preparation:	2011-03-03	Prepared By:	kg
Prep Batch:	67158				

Parameter	Flag	RL		Units	Dilution	RL
		Result				
DRO		<50.0		mg/Kg	1	50.0

Report Date: March 14, 2011
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South Monument Gathering Sour

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		87.5	mg/Kg	1	100	88	70 - 130

Sample: 259346 - E. Wall-11, 17'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79088 Date Analyzed: 2011-03-08 Analyzed By: ME
Prep Batch: 67106 Sample Preparation: 2011-03-08 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.49	mg/Kg	1	2.00	124	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.15	mg/Kg	1	2.00	108	42 - 159

Sample: 259347 - W. Wal-11, 17'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 79169 Date Analyzed: 2011-03-03 Analyzed By: kg
Prep Batch: 67158 Sample Preparation: 2011-03-03 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		86.8	mg/Kg	1	100	87	70 - 130

Sample: 259347 - W. Wal-11, 17'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79088 Date Analyzed: 2011-03-08 Analyzed By: ME
Prep Batch: 67106 Sample Preparation: 2011-03-08 Prepared By: ME

continued ...

Report Date: March 14, 2011
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South Monument Gathering Sour

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sample 259347 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.62	mg/Kg	1	2.00	131	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.26	mg/Kg	1	2.00	113	42 - 159

Method Blank (1) QC Batch: 79088

QC Batch: 79088
Prep Batch: 67106

Date Analyzed: 2011-03-08
QC Preparation: 2011-03-08

Analyzed By: ME
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<0.753	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.98	mg/Kg	1	2.00	99	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.60	mg/Kg	1	2.00	80	52.4 - 130

Method Blank (1) QC Batch: 79169

QC Batch: 79169
Prep Batch: 67158

Date Analyzed: 2011-03-03
QC Preparation: 2011-03-03

Analyzed By: kg
Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<15.7	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		90.1	mg/Kg	1	100	90	70 - 130

Report Date: March 14, 2011
2001-11193

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Laboratory Control Spike (LCS-1)

QC Batch: 79088
Prep Batch: 67106

Date Analyzed: 2011-03-08
QC Preparation: 2011-03-08

Analyzed By: ME
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	12.9	mg/Kg	1	20.0	<0.753	64	60.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	13.7	mg/Kg	1	20.0	<0.753	68	60.9 - 95.4	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)	1.98	1.93	mg/Kg	1	2.00	99	96	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.76	1.74	mg/Kg	1	2.00	88	87	68.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 79169
Prep Batch: 67158

Date Analyzed: 2011-03-03
QC Preparation: 2011-03-03

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	241	mg/Kg	1	250	<15.7	96	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	230	mg/Kg	1	250	<15.7	92	47.5 - 144.1	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	110	108	mg/Kg	1	100	110	108	70 - 130

Matrix Spike (MS-1) Spiked Sample: 259734

QC Batch: 79088
Prep Batch: 67106

Date Analyzed: 2011-03-08
QC Preparation: 2011-03-08

Analyzed By: ME
Prepared By: ME

Report Date: March 14, 2011
2001-11193

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.6	mg/Kg	1	20.0	<0.753	78	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.4	mg/Kg	1	20.0	<0.753	77	61.8 - 114	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)	2.56	2.52	mg/Kg	1	2	128	126	50 - 162
4-Bromofluorobenzene (4-BFB)	2.15	2.03	mg/Kg	1	2	108	102	50 - 162

Matrix Spike (MS-1) Spiked Sample: 259355

QC Batch: 79169
Prep Batch: 67158

Date Analyzed: 2011-03-03
QC Preparation: 2011-03-03

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	239	mg/Kg	1	250	37.1	81	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	263	mg/Kg	1	250	37.1	90	11.7 - 152.3	10	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	109	107	mg/Kg	1	100	109	107	70 - 130

Standard (CCV-1)

QC Batch: 79088

Date Analyzed: 2011-03-08

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.850	85	80 - 120	2011-03-08

Report Date: March 14, 2011
2001-11193

Work Order: 11030235
South Monument Gathering Sour

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Standard (CCV-2)

QC Batch: 79088

Date Analyzed: 2011-03-08

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.804	80	80 - 120	2011-03-08

Standard (CCV-1)

QC Batch: 79169

Date Analyzed: 2011-03-03

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	241	96	80 - 120	2011-03-03

Standard (CCV-2)

QC Batch: 79169

Date Analyzed: 2011-03-03

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	234	94	80 - 120	2011-03-03

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (877) 242-7750

Hold

(Circle or Specify Method No.)

	Dry Weight Basis Required
	TRRP Report Required
	Check If Special Reporting Limits Are Needed

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7758



1797 Alameda Avenue, Suite 9 Lubbock, Texas 79424 TEL: 806 • 764 • 1200 FAX: 806 • 764 • 1202
2057 Commerce Street, Suite F El Paso, Texas 79902 TEL: 915 • 645 • 4403 FAX: 915 • 645 • 4404
5102 E. Loop, Suite 4004 Amarillo, Texas 79102 TEL: 806 • 428 • 1200 FAX: 806 • 428 • 1201
10000 Highway 190, Suite 100 Midland, Texas 79703 TEL: 409 • 271 • 8800 FAX: 409 • 271 • 8803
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Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

E-mail Reports
Nova Safety & Environmental
2057 Commerce St.
Midland, TX. 79703

Report Date: March 17, 2011

Work Order: 11030735



Project Location: South of Monument, NM
Project Name: South Monument Gathering Sour
Project Number: 2001-11193

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
259887	FLR-12, 21'	soil	2011-03-07	11:51	2011-03-07
259888	E. Wall-12, 19'	soil	2011-03-07	11:54	2011-03-07
259889	W. Wall-12, 19'	soil	2011-03-07	11:58	2011-03-07

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.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2011-03-07 and assigned to work order 11030735. Samples for work order 11030735 were received intact at a temperature of 3.1 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	67269	2011-03-10 at 11:05	79285	2011-03-10 at 11:05
TPH GRO	S 8015 D	67162	2011-03-10 at 11:27	79175	2011-03-10 at 11:27
TPH GRO	S 8015 D	67358	2011-03-15 at 10:58	79389	2011-03-15 at 10:58

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 11030735 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

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2001-11193

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South Monument Gathering Sour

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Analytical Report

Sample: 259887 - FLR-12, 21'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2011-03-10	Analyzed By:	kg
QC Batch:	79285	Sample Preparation:	2011-03-10	Prepared By:	kg
Prep Batch:	67269				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		93.7	mg/Kg	1	100	94	70 - 130

Sample: 259887 - FLR-12, 21'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2011-03-10	Analyzed By:	ME
QC Batch:	79175	Sample Preparation:	2011-03-10	Prepared By:	ME
Prep Batch:	67162				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.49	mg/Kg	1	2.00	124	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.32	mg/Kg	1	2.00	116	42 - 159

Sample: 259888 - E. Wall-12, 19'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2011-03-10	Analyzed By:	kg
QC Batch:	79285	Sample Preparation:	2011-03-10	Prepared By:	kg
Prep Batch:	67269				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		94.6	mg/Kg	1	100	95	70 - 130

Sample: 259888 - E. Wall-12, 19'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79175 Date Analyzed: 2011-03-10 Analyzed By: ME
Prep Batch: 67162 Sample Preparation: 2011-03-10 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		11.3	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.92	mg/Kg	1	2.00	146	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.62	mg/Kg	1	2.00	131	42 - 159

Sample: 259889 - W. Wall-12, 19'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 79285 Date Analyzed: 2011-03-10 Analyzed By: kg
Prep Batch: 67269 Sample Preparation: 2011-03-10 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		94.4	mg/Kg	1	100	94	70 - 130

Sample: 259889 - W. Wall-12, 19'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79389 Date Analyzed: 2011-03-15 Analyzed By: ME
Prep Batch: 67358 Sample Preparation: 2011-03-15 Prepared By: ME

continued ...

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sample 259889 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.34	mg/Kg	1	2.00	117	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.10	mg/Kg	1	2.00	105	42 - 159

Method Blank (1) QC Batch: 79175

QC Batch: 79175 Date Analyzed: 2011-03-10 Analyzed By: ME
Prep Batch: 67162 QC Preparation: 2011-03-10 Prepared By: ME

Parameter	Flag	MDL		Units	RL
		Result			
GRO		<0.753		mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.00	mg/Kg	1	2.00	100	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.80	mg/Kg	1	2.00	90	52.4 - 130

Method Blank (1) QC Batch: 79285

QC Batch: 79285 Date Analyzed: 2011-03-10 Analyzed By: kg
Prep Batch: 67269 QC Preparation: 2011-03-10 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<15.7	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		106	mg/Kg	1	100	106	70 - 130

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Method Blank (1) QC Batch: 79389

QC Batch: 79389
Prep Batch: 67358

Date Analyzed: 2011-03-15
QC Preparation: 2011-03-15

Analyzed By: ME
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<0.753	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.96	mg/Kg	1	2.00	98	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.65	mg/Kg	1	2.00	82	52.4 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 79175
Prep Batch: 67162

Date Analyzed: 2011-03-10
QC Preparation: 2011-03-10

Analyzed By: ME
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	13.8	mg/Kg	1	20.0	<0.753	69	60.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	13.5	mg/Kg	1	20.0	<0.753	68	60.9 - 95.4	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)	1.91	1.95	mg/Kg	1	2.00	96	98	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.83	1.86	mg/Kg	1	2.00	92	93	68.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 79285
Prep Batch: 67269

Date Analyzed: 2011-03-10
QC Preparation: 2011-03-10

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	248	mg/Kg	1	250	<15.7	99	47.5 - 144.1

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

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Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	219	mg/Kg	1	250	<15.7	88	47.5 - 144.1	12	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	109	104	mg/Kg	1	100	109	104	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 79389
Prep Batch: 67358

Date Analyzed: 2011-03-15
QC Preparation: 2011-03-15

Analyzed By: ME
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.2	mg/Kg	1	20.0	<0.753	71	60.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	13.8	mg/Kg	1	20.0	<0.753	69	60.9 - 95.4	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.99	1.97	mg/Kg	1	2.00	100	98	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.82	1.82	mg/Kg	1	2.00	91	91	68.2 - 132

Matrix Spike (MS-1) Spiked Sample: 259888

QC Batch: 79175
Prep Batch: 67162

Date Analyzed: 2011-03-10
QC Preparation: 2011-03-10

Analyzed By: ME
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	¹ 19.2	mg/Kg	1	20.0	11.3277	39	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	² 13.1	mg/Kg	1	20.0	11.3277	9	61.8 - 114	38	20

¹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

²Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.21	2.08	mg/Kg	1	2	110	104	50 - 162
4-Bromofluorobenzene (4-BFB)	2.36	2.03	mg/Kg	1	2	118	102	50 - 162

Matrix Spike (MS-1) Spiked Sample: 259888

QC Batch: 79285 Date Analyzed: 2011-03-10 Analyzed By: kg
Prep Batch: 67269 QC Preparation: 2011-03-10 Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	271	mg/Kg	1	250	<15.7	108	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	230	mg/Kg	1	250	<15.7	92	11.7 - 152.3	16	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	110	101	mg/Kg	1	100	110	101	70 - 130

Matrix Spike (MS-1) Spiked Sample: 259889

QC Batch: 79389 Date Analyzed: 2011-03-15 Analyzed By: ME
Prep Batch: 67358 QC Preparation: 2011-03-15 Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.4	mg/Kg	1	20.0	<0.753	72	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.1	mg/Kg	1	20.0	<0.753	76	61.8 - 114	5	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.56	2.54	mg/Kg	1	2	128	127	50 - 162

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matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	2.43	2.39	mg/Kg	1	2	122	120	50 - 162

Standard (CCV-2)

QC Batch: 79175

Date Analyzed: 2011-03-10

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.832	83	80 - 120	2011-03-10

Standard (CCV-3)

QC Batch: 79175

Date Analyzed: 2011-03-10

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.08	108	80 - 120	2011-03-10

Standard (CCV-2)

QC Batch: 79285

Date Analyzed: 2011-03-10

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	230	92	80 - 120	2011-03-10

Standard (CCV-3)

QC Batch: 79285

Date Analyzed: 2011-03-10

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	226	90	80 - 120	2011-03-10

Standard (CCV-4)

QC Batch: 79285

Date Analyzed: 2011-03-10

Analyzed By: kg

Report Date: March 17, 2011
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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	251	100	80 - 120	2011-03-10

Standard (CCV-1)

QC Batch: 79389

Date Analyzed: 2011-03-15

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.925	92	80 - 120	2011-03-15

Standard (CCV-2)

QC Batch: 79389

Date Analyzed: 2011-03-15

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.19	119	80 - 120	2011-03-15

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel: (877) 242-7750

Hold

(Circle or Specify Method No.)

Limits Are Ne

Text-Midland

performed

reporting

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TRACE ANALYSIS, INC.

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Certifications

WBENC: 237019

HUB: 1752439743100-86536
 NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
 LELAP-02003
 Kansas E-10317

El Paso: T104704221-08-TX
 LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Nova Safety & Environmental
 2057 Commerce St.
 Midland, TX. 79703

Report Date: March 24, 2011

Work Order: 11031406



Project Location: South of Monument, NM
 Project Name: South Monument Gathering Sour
 Project Number: 2001-11193

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
260461	Mid Flow Path W Wall 13. 21'	soil	2011-03-11	14:15	2011-03-14
260462	Mid Flow Path E Wall 13. 21'	soil	2011-03-11	14:20	2011-03-14
260463	Mid Flow Path FLR 13. 25'	soil	2011-03-11	14:25	2011-03-14

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.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2011-03-14 and assigned to work order 11031406. Samples for work order 11031406 were received intact at a temperature of 1.8 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	67580	2011-03-22 at 14:13	79658	2011-03-22 at 14:13
TPH GRO	S 8015 D	67610	2011-03-23 at 15:48	79699	2011-03-23 at 15:48

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 11031406 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.

Report Date: March 24, 2011
2001-11193

Work Order: 11031406
South Monument Gathering Sour

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Analytical Report

Sample: 260461 - Mid Flow Path W Wall 13, 21'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	79658	Date Analyzed:	2011-03-22
Prep Batch:	67580	Sample Preparation:	2011-03-22
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		73.4	mg/Kg	1	100	73	70 - 130

Sample: 260461 - Mid Flow Path W Wall 13, 21'

Laboratory:	Lubbock		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	79699	Date Analyzed:	2011-03-23
Prep Batch:	67610	Sample Preparation:	2011-03-23
		Prep Method:	S 5035
		Analyzed By:	ER
		Prepared By:	ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.47	mg/Kg	1	2.00	124	70 - 130
4-Bromofluorobenzene (4-BFB)		2.34	mg/Kg	1	2.00	117	70 - 130

Sample: 260462 - Mid Flow Path E Wall 13, 21'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	79658	Date Analyzed:	2011-03-22
Prep Batch:	67580	Sample Preparation:	2011-03-22
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

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2001-11193

Work Order: 11031406
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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	1	67.5	mg/Kg	1	100	68	70 - 130

Sample: 260462 - Mid Flow Path E Wall 13, 21'

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79699 Date Analyzed: 2011-03-23 Analyzed By: ER
Prep Batch: 67610 Sample Preparation: 2011-03-23 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.51	mg/Kg	1	2.00	76	70 - 130
4-Bromofluorobenzene (4-BFB)		1.43	mg/Kg	1	2.00	72	70 - 130

Sample: 260463 - Mid Flow Path FLR 13, 25'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 79658 Date Analyzed: 2011-03-22 Analyzed By: kg
Prep Batch: 67580 Sample Preparation: 2011-03-22 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	2	68.5	mg/Kg	1	100	68	70 - 130

Sample: 260463 - Mid Flow Path FLR 13, 25'

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79699 Date Analyzed: 2011-03-23 Analyzed By: ER
Prep Batch: 67610 Sample Preparation: 2011-03-23 Prepared By: ER

continued ...

¹Surrogate out due to peak interference.

²Surrogate out due to peak interference.

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2001-11193

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South Monument Gathering Sour

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sample 260463 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.26	mg/Kg	1	2.00	113	70 - 130
4-Bromofluorobenzene (4-BFB)		2.14	mg/Kg	1	2.00	107	70 - 130

Method Blank (1) QC Batch: 79658

QC Batch: 79658 Date Analyzed: 2011-03-22 Analyzed By: kg
Prep Batch: 67580 QC Preparation: 2011-03-22 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<15.7	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		80.8	mg/Kg	1	100	81	70 - 130

Method Blank (1) QC Batch: 79699

QC Batch: 79699 Date Analyzed: 2011-03-23 Analyzed By: ER
Prep Batch: 67610 QC Preparation: 2011-03-23 Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
GRO		<0.446	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.11	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)		1.89	mg/Kg	1	2.00	94	70 - 130

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2001-11193

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Laboratory Control Spike (LCS-1)

QC Batch: 79658
Prep Batch: 67580

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	222	mg/Kg	1	250	<15.7	89	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	250	mg/Kg	1	250	<15.7	100	47.5 - 144.1	12	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	92.4	91.3	mg/Kg	1	100	92	91	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 79699
Prep Batch: 67610

Date Analyzed: 2011-03-23
QC Preparation: 2011-03-23

Analyzed By: ER
Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	21.2	mg/Kg	1	20.0	<0.446	106	70 - 130

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	21.2	mg/Kg	1	20.0	<0.446	106	70 - 130	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
Trifluorotoluene (TFT)	1.89	1.91	mg/Kg	1	2.00	94	96	70 - 130
4-Bromofluorobenzene (4-BFB)	1.86	1.92	mg/Kg	1	2.00	93	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 260596

QC Batch: 79658
Prep Batch: 67580

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: kg
Prepared By: kg

Report Date: March 24, 2011
2001-11193

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	200	mg/Kg	1	250	<15.7	80	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	193	mg/Kg	1	250	<15.7	77	11.7 - 152.3	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
n-Tricosane	87.1	87.9	mg/Kg	1	100	87	88	70 - 130

Matrix Spike (xMS-1) Spiked Sample:

QC Batch: 79699
Prep Batch: 67610

Date Analyzed: 2011-03-23
QC Preparation: 2011-03-23

Analyzed By: ER
Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	25.7	mg/Kg	1	20.0	2.25	117	70 - 130

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	25.9	mg/Kg	1	20.0	2.25	118	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)	2.20	2.12	mg/Kg	1	2	110	106	70 - 130
4-Bromofluorobenzene (4-BFB)	2.22	2.11	mg/Kg	1	2	111	106	70 - 130

Standard (CCV-1)

QC Batch: 79658

Date Analyzed: 2011-03-22

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	241	96	80 - 120	2011-03-22

Report Date: March 24, 2011
2001-11193

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South Monument Gathering Sour

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Standard (CCV-2)

QC Batch: 79658

Date Analyzed: 2011-03-22

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	204	82	80 - 120	2011-03-22

Standard (CCV-1)

QC Batch: 79699

Date Analyzed: 2011-03-23

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.09	109	80 - 120	2011-03-23

Standard (CCV-2)

QC Batch: 79699

Date Analyzed: 2011-03-23

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.06	106	80 - 120	2011-03-23

LAB Order ID # 11031406

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
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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) 262-7750

Company Name: Nova Safety & Environmental Phone #: 432-894-7166
Address: (Street, City, Zip) Fax #:

Contact Person: Ron Ransaville E-mail: Ransaville@novasafety.com
Invoice to: (If different from above)

Project #: 2057 Corniche
Project Name: South Monument Gathering Seur
Sampler Signature: Matthew

Project Location (including state): Lee, Co. NM

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX			PRESERVATIVE METHOD				SAMPLING	
				WATER	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	ICE	DATE	TIME
200401	Mid Flow Path	1	4oz	X						X	8-11	14:15
402	W. Wall 13, 21'	1		X						X	3-11	14:20
403	E. Wall 13, 21'	1		X						X	3-11	14:25
	FLR 13, 25'	1		X						X		

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021 / 602 / 8260 / 624																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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LAB USE ONLY		REMARKS:	
Relinquished by: <u>Trace</u>	Time: <u>9:40</u>	INST: <u>18</u>	X All tests - <u>Midland</u> <u>Geo Lucas</u> Dry Weight Basis Required ☐ TRRP Report Required ☐ Check If Special Reporting Limits Are Needed ☐
Received by: <u>Trace</u>	Time: <u>9:40</u>	OBS: <u>9:40</u>	
Relinquished by:	Time:	COR:	
Relinquished by:	Time:	INST: <u>18</u>	Carrier # <u>25 2115951</u>

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

TRACE ANALYSIS, INC.

1797 Alameda Avenue, Suite 9 Lubbock, Texas 79424 Tel: 806-764-1200 Fax: 806-764-1202
 2057 Commerce Street El Paso, Texas 79902 Tel: 915-545-4543 Fax: 915-545-4543
 5102 First Street, Suite 4 Amarillo, Texas 79102 Tel: 806-427-6800 Fax: 806-427-6800
 1500 Harris Parkway, Suite 100 Midland, Texas 79703 Tel: 409-682-8800 Fax: 409-682-8800

Certifications

WBENC: 237019

HUB: 1752439743100-86536
 NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
 LELAP-02003
 Kansas E-10317

El Paso: T104704221-08-TX
 LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Nova Safety & Environmental
 2057 Commerce St.
 Midland, TX. 79703

Report Date: March 24, 2011

Work Order: 11031406



Project Location: South of Monument, NM
 Project Name: South Monument Gathering Sour
 Project Number: 2001-11193

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
260461	Mid Flow Path W Wall 13. 21'	soil	2011-03-11	14:15	2011-03-14
260462	Mid Flow Path E Wall 13. 21'	soil	2011-03-11	14:20	2011-03-14
260463	Mid Flow Path FLR 13. 25'	soil	2011-03-11	14:25	2011-03-14

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.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2011-03-14 and assigned to work order 11031406. Samples for work order 11031406 were received intact at a temperature of 1.8 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	67580	2011-03-22 at 14:13	79658	2011-03-22 at 14:13
TPH GRO	S 8015 D	67610	2011-03-23 at 15:48	79699	2011-03-23 at 15:48

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 11031406 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.

Report Date: March 24, 2011
2001-11193

Work Order: 11031406
South Monument Gathering Sour

Page Number: 4 of 9
South of Monument, NM

Analytical Report

Sample: 260461 - Mid Flow Path W Wall 13, 21'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	79658	Date Analyzed:	2011-03-22
Prep Batch:	67580	Sample Preparation:	2011-03-22
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		73.4	mg/Kg	1	100	73	70 - 130

Sample: 260461 - Mid Flow Path W Wall 13, 21'

Laboratory:	Lubbock		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	79699	Date Analyzed:	2011-03-23
Prep Batch:	67610	Sample Preparation:	2011-03-23
		Prep Method:	S 5035
		Analyzed By:	ER
		Prepared By:	ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.47	mg/Kg	1	2.00	124	70 - 130
4-Bromofluorobenzene (4-BFB)		2.34	mg/Kg	1	2.00	117	70 - 130

Sample: 260462 - Mid Flow Path E Wall 13, 21'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	79658	Date Analyzed:	2011-03-22
Prep Batch:	67580	Sample Preparation:	2011-03-22
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Report Date: March 24, 2011
2001-11193

Work Order: 11031406
South Monument Gathering Sour

Page Number: 5 of 9
South of Monument, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	1	67.5	mg/Kg	1	100	68	70 - 130

Sample: 260462 - Mid Flow Path E Wall 13, 21'

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79699 Date Analyzed: 2011-03-23 Analyzed By: ER
Prep Batch: 67610 Sample Preparation: 2011-03-23 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.51	mg/Kg	1	2.00	76	70 - 130
4-Bromofluorobenzene (4-BFB)		1.43	mg/Kg	1	2.00	72	70 - 130

Sample: 260463 - Mid Flow Path FLR 13, 25'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 79658 Date Analyzed: 2011-03-22 Analyzed By: kg
Prep Batch: 67580 Sample Preparation: 2011-03-22 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	2	68.5	mg/Kg	1	100	68	70 - 130

Sample: 260463 - Mid Flow Path FLR 13, 25'

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79699 Date Analyzed: 2011-03-23 Analyzed By: ER
Prep Batch: 67610 Sample Preparation: 2011-03-23 Prepared By: ER

continued ...

¹Surrogate out due to peak interference.

²Surrogate out due to peak interference.

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sample 260463 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.26	mg/Kg	1	2.00	113	70 - 130
4-Bromofluorobenzene (4-BFB)		2.14	mg/Kg	1	2.00	107	70 - 130

Method Blank (1) QC Batch: 79658

QC Batch: 79658 Date Analyzed: 2011-03-22 Analyzed By: kg
Prep Batch: 67580 QC Preparation: 2011-03-22 Prepared By: kg

Parameter	Flag	MDL		Units	RL		
DRO		Result		mg/Kg	50		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		80.8	mg/Kg	1	100	81	70 - 130

Method Blank (1) QC Batch: 79699

QC Batch: 79699 Date Analyzed: 2011-03-23 Analyzed By: ER
Prep Batch: 67610 QC Preparation: 2011-03-23 Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
GRO		<0.446	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.11	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)		1.89	mg/Kg	1	2.00	94	70 - 130

Report Date: March 24, 2011
2001-11193

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South Monument Gathering Sour

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Laboratory Control Spike (LCS-1)

QC Batch: 79658
Prep Batch: 67580

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	222	mg/Kg	1	250	<15.7	89	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	250	mg/Kg	1	250	<15.7	100	47.5 - 144.1	12	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	92.4	91.3	mg/Kg	1	100	92	91	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 79699
Prep Batch: 67610

Date Analyzed: 2011-03-23
QC Preparation: 2011-03-23

Analyzed By: ER
Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	21.2	mg/Kg	1	20.0	<0.446	106	70 - 130

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	21.2	mg/Kg	1	20.0	<0.446	106	70 - 130	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
Trifluorotoluene (TFT)	1.89	1.91	mg/Kg	1	2.00	94	96	70 - 130
4-Bromofluorobenzene (4-BFB)	1.86	1.92	mg/Kg	1	2.00	93	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 260596

QC Batch: 79658
Prep Batch: 67580

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: kg
Prepared By: kg

Report Date: March 24, 2011
2001-11193

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	200	mg/Kg	1	250	<15.7	80	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	193	mg/Kg	1	250	<15.7	77	11.7 - 152.3	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
n-Tricosane	87.1	87.9	mg/Kg	1	100	87	88	70 - 130

Matrix Spike (xMS-1) Spiked Sample:

QC Batch: 79699
Prep Batch: 67610

Date Analyzed: 2011-03-23
QC Preparation: 2011-03-23

Analyzed By: ER
Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	25.7	mg/Kg	1	20.0	2.25	117	70 - 130

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	25.9	mg/Kg	1	20.0	2.25	118	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)	2.20	2.12	mg/Kg	1	2	110	106	70 - 130
4-Bromofluorobenzene (4-BFB)	2.22	2.11	mg/Kg	1	2	111	106	70 - 130

Standard (CCV-1)

QC Batch: 79658

Date Analyzed: 2011-03-22

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	241	96	80 - 120	2011-03-22

Report Date: March 24, 2011
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Work Order: 11031406
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Standard (CCV-2)

QC Batch: 79658

Date Analyzed: 2011-03-22

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	204	82	80 - 120	2011-03-22

Standard (CCV-1)

QC Batch: 79699

Date Analyzed: 2011-03-23

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.09	109	80 - 120	2011-03-23

Standard (CCV-2)

QC Batch: 79699

Date Analyzed: 2011-03-23

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.06	106	80 - 120	2011-03-23

LAB Order ID # 11031406

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TraceAnalysis, Inc.

email: lab@traceanalysis.com

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BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 262-7750

Company Name: Nova Safety & Environmental Phone #: 432-894-7166
Address: (Street, City, Zip) Fax #:

Contact Person: Ron Ransaville E-mail: Ransaville@novasafety.com
Invoice to: (If different from above)

Project #: 2057 Corniche
Project Location (including state): Lea, Co. NM

Project Name: South Monument Gathering Seur
Sampler Signature: Matthew

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		Turn Around Time
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME	
200401	Mid Flow Path															
200401	W. Wall 13, 21'	1	4oz	X								X		8-11	14:15	X
402	E. Wall 13, 21'	1	1	X								X		3-11	14:20	X
403	FLR 13, 25'	1	1	X								X		3-11	14:25	X
	</															

ANALYSIS REQUEST (Circle or Specify Method No.)

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

LAB USE ONLY		REMARKS:	
Relinquished by: <u>Trace</u>	Time: <u>9:40</u>	INST: <u>18</u>	X All tests - <u>Field</u> <u>GLC XUGAC</u> Dry Weight Basis Required ☐ TRRP Report Required ☐ Check If Special Reporting Limits Are Needed ☐
Relinquished by: <u>Trace</u>	Time: <u>9:40</u>	INST: <u>18</u>	
Relinquished by: <u>Trace</u>	Time: <u>9:40</u>	INST: <u>18</u>	

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

Carrier #

25 2115951



1797 Alameda Avenue, Suite 9 Lubbock, Texas 79424 Tel: 806•764•1200 Fax: 806•764•1202
 2057 Commerce Street, Suite F El Paso, Texas 79902 Tel: 915•645•4443 Fax: 915•645•4444
 5102 East Street, Suite 4 Amarillo, Texas 79102 Tel: 806•427•6673 Fax: 806•427•6673
 1000 North Parkway, Suite 100 Midland, Texas 79701 Tel: 409•687•8800 Fax: 409•687•8800

Certifications

WBENC: 237019

HUB: 1752439743100-86536

DBE: VN 20657

NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX

El Paso: T104704221-08-TX

Midland: T104704392-08-TX

LELAP-02003

LELAP-02002

Kansas E-10317

Analytical and Quality Control Report

E-mail Reports
 Nova Safety & Environmental
 2057 Commerce St.
 Midland, TX. 79703

Report Date: March 24, 2011

Work Order: 11031529



Project Location: South of Monument, NM
 Project Name: South Monument Gathering Sour
 Project Number: 2001-11193

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
260594	North Flow Path E Wall-2N, 20'	soil	2011-03-15	11:00	2011-03-15
260595	North Flow Path W Wall-2N, 20'	soil	2011-03-15	11:05	2011-03-15
260596	North Flow Path FLR-2N, 25'	soil	2011-03-15	11:10	2011-03-15

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.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2011-03-15 and assigned to work order 11031529. Samples for work order 11031529 were received intact at a temperature of 4.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	67580	2011-03-22 at 14:13	79658	2011-03-22 at 14:13
TPH GRO	S 8015 D	67610	2011-03-23 at 15:48	79699	2011-03-23 at 15:48

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 11031529 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.

Report Date: March 24, 2011
2001-11193

Work Order: 11031529
South Monument Gathering Sour

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South of Monument, NM

Analytical Report

Sample: 260594 - North Flow Path E Wall-2N, 20'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	79658	Date Analyzed:	2011-03-22
Prep Batch:	67580	Sample Preparation:	2011-03-22
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		79.7	mg/Kg	1	100	80	70 - 130

Sample: 260594 - North Flow Path E Wall-2N, 20'

Laboratory:	Lubbock		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	79699	Date Analyzed:	2011-03-23
Prep Batch:	67610	Sample Preparation:	2011-03-23
		Prep Method:	S 5035
		Analyzed By:	ER
		Prepared By:	ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.30	mg/Kg	1	2.00	115	70 - 130
4-Bromofluorobenzene (4-BFB)		2.15	mg/Kg	1	2.00	108	70 - 130

Sample: 260595 - North Flow Path W Wall-2N, 20'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	79658	Date Analyzed:	2011-03-22
Prep Batch:	67580	Sample Preparation:	2011-03-22
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Report Date: March 24, 2011
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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		73.9	mg/Kg	1	100	74	70 - 130

Sample: 260595 - North Flow Path W Wall-2N, 20'

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79699 Date Analyzed: 2011-03-23 Analyzed By: ER
Prep Batch: 67610 Sample Preparation: 2011-03-23 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.08	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)		1.99	mg/Kg	1	2.00	100	70 - 130

Sample: 260596 - North Flow Path FLR-2N, 25'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 79658 Date Analyzed: 2011-03-22 Analyzed By: kg
Prep Batch: 67580 Sample Preparation: 2011-03-22 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		73.6	mg/Kg	1	100	74	70 - 130

Sample: 260596 - North Flow Path FLR-2N, 25'

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79699 Date Analyzed: 2011-03-23 Analyzed By: ER
Prep Batch: 67610 Sample Preparation: 2011-03-23 Prepared By: ER

continued ...

Report Date: March 24, 2011
2001-11193

Work Order: 11031529
South Monument Gathering Sour

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sample 260596 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.36	mg/Kg	1	2.00	118	70 - 130
4-Bromofluorobenzene (4-BFB)		2.23	mg/Kg	1	2.00	112	70 - 130

Method Blank (1) QC Batch: 79658

QC Batch: 79658 Date Analyzed: 2011-03-22 Analyzed By: kg
Prep Batch: 67580 QC Preparation: 2011-03-22 Prepared By: kg

Parameter	Flag	MDL		Units	RL		
DRO		Result		mg/Kg	50		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		80.8	mg/Kg	1	100	81	70 - 130

Method Blank (1) QC Batch: 79699

QC Batch: 79699 Date Analyzed: 2011-03-23 Analyzed By: ER
Prep Batch: 67610 QC Preparation: 2011-03-23 Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
GRO		<0.446	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.11	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)		1.89	mg/Kg	1	2.00	94	70 - 130

Report Date: March 24, 2011
2001-11193

Work Order: 11031529
South Monument Gathering Sour

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Laboratory Control Spike (LCS-1)

QC Batch: 79658
Prep Batch: 67580

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	222	mg/Kg	1	250	<15.7	89	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	250	mg/Kg	1	250	<15.7	100	47.5 - 144.1	12	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	92.4	91.3	mg/Kg	1	100	92	91	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 79699
Prep Batch: 67610

Date Analyzed: 2011-03-23
QC Preparation: 2011-03-23

Analyzed By: ER
Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	21.2	mg/Kg	1	20.0	<0.446	106	70 - 130

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	21.2	mg/Kg	1	20.0	<0.446	106	70 - 130	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
Trifluorotoluene (TFT)	1.89	1.91	mg/Kg	1	2.00	94	96	70 - 130
4-Bromofluorobenzene (4-BFB)	1.86	1.92	mg/Kg	1	2.00	93	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 260596

QC Batch: 79658
Prep Batch: 67580

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: kg
Prepared By: kg

Report Date: March 24, 2011
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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	200	mg/Kg	1	250	<15.7	80	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	193	mg/Kg	1	250	<15.7	77	11.7 - 152.3	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
n-Tricosane	87.1	87.9	mg/Kg	1	100	87	88	70 - 130

Matrix Spike (xMS-1) Spiked Sample:

QC Batch: 79699
Prep Batch: 67610

Date Analyzed: 2011-03-23
QC Preparation: 2011-03-23

Analyzed By: ER
Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	25.7	mg/Kg	1	20.0	2.25	117	70 - 130

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	25.9	mg/Kg	1	20.0	2.25	118	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)	2.20	2.12	mg/Kg	1	2	110	106	70 - 130
4-Bromofluorobenzene (4-BFB)	2.22	2.11	mg/Kg	1	2	111	106	70 - 130

Standard (CCV-1)

QC Batch: 79658

Date Analyzed: 2011-03-22

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	241	96	80 - 120	2011-03-22

Report Date: March 24, 2011
2001-11193

Work Order: 11031529
South Monument Gathering Sour

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South of Monument, NM

Standard (CCV-2)

QC Batch: 79658

Date Analyzed: 2011-03-22

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	204	82	80 - 120	2011-03-22

Standard (CCV-3)

QC Batch: 79658

Date Analyzed: 2011-03-22

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	231	92	80 - 120	2011-03-22

Standard (CCV-1)

QC Batch: 79699

Date Analyzed: 2011-03-23

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.09	109	80 - 120	2011-03-23

Standard (CCV-2)

QC Batch: 79699

Date Analyzed: 2011-03-23

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.06	106	80 - 120	2011-03-23

110315209

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

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

Company Name: Nova Safety & Environmental (Street, City, Zip) 2057 Commerce
Address: 2057 Commerce
Contact Person: Ron Rounsaville
Invoice to: ~~SAFETY~~ Plains
(If different from above)
Project #: SR5# 2007-11193
Project Location (including state): Monument, NM
Phone #: 432-894-7166
Fax #:
E-mail: rronsaville@novasafety.com
Project Name: S. Mont. to the Jour
Sampler Signature: M. Hatten

[illegible]

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Matt Green	Nova	3-15-11	13:30	ARMC	Traffic Analysis	3-15-11	13:30
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
					OBS		
					COR		
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
					OBS		
					COR		

[illegible]

☐ ☐ ☐ ☐	REMARKS: Fall tests - Midland
LAB USE ONLY Intact ☒ N Headspace Y ☒ NA	Dry Weight Basis Required TRRP Report Required Check If Special Reporting Limits Are Needed
☐ ☐ ☐ ☐	4°C Log-in-Review ☒

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

Conditions listed on reverse

LAB Order ID # 11031529

200594-596

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
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Carrollton, Texas 75006
Tel (972) 242-7750

email: lab@traceanalysis.com

Company Name: Nova Safety & Environmental
Address: (Street, City, Zip)
Contact Person: Ron Rounsaville
Invoice to: ~~Novasville@novasafety.com~~
Project #: SRS # 2001-11193
Project Location (including state): Marquette, NM

Phone # 432-894-7166
Fax #
E-mail: rounsaville@novasafety.com
Project Name: S. Mont. to the Jour
Sample Signature: [Signature]
Project Location (including state): Marquette, NM

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE	8021 / 602 / 8260 / 624																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Relinquished by: P. Hatten
Relinquished by: P. Hatten
Relinquished by: P. Hatten

Company: Nova
Company: Nova
Company: Nova

Date: 3-15-11
Date: 3-15-11
Date: 3-15-11

Time: 13:30
Time: 13:30
Time: 13:30

INST OBS COR
INST OBS COR
INST OBS COR

LAB USE ONLY

REMARKS: Hall tests - attached LUBBOX

4°C

Headspace Y/N N/A

Dry Weight Basis Required
TRRP Report Required
Check if Special Reporting Limits Are Needed

TRACE ANALYSIS, INC.

1701 Alameda Avenue, Suite 9 Lubbock, Texas 79424 Tel: 806•764•1200 Fax: 806•764•1202
 2057 Commerce Street, Suite F El Paso, Texas 79902 Tel: 915•545•4543 Fax: 915•545•4543
 5102 E. 12th Street, Suite 4 Amarillo, Texas 79122 Tel: 806•427•6500 Fax: 806•427•6500
 1000 North Parkway, Suite 100 Midland, Texas 79703 Tel: 409•692•8800 Fax: 409•692•8800

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX **El Paso:** T104704221-08-TX **Midland:** T104704392-08-TX
 LELAP-02003 LELAP-02002
 Kansas E-10317

Analytical and Quality Control Report

E-mail Reports
 Nova Safety & Environmental
 2057 Commerce St.
 Midland, TX. 79703

Report Date: March 24, 2011

Work Order: 11031607



Project Location: South of Monument, NM
 Project Name: South Monument Gathering Sour
 Project Number: 2001-11193

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
260678	North Flow Path N Wall-2N. 20'	soil	2011-03-16	09:15	2011-03-16
260679	North Flow Path S Wall-2N. 20'	soil	2011-03-16	09:20	2011-03-16

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.

This report consists of a total of 8 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2011-03-16 and assigned to work order 11031607. Samples for work order 11031607 were received intact at a temperature of 7.9 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	67580	2011-03-22 at 14:13	79658	2011-03-22 at 14:13
TPH GRO	S 8015 D	67610	2011-03-23 at 15:48	79699	2011-03-23 at 15:48

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 11031607 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.

Report Date: March 24, 2011
2001-11193

Work Order: 11031607
South Monument Gathering Sour

Page Number: 4 of 8
South of Monument, NM

Analytical Report

Sample: 260678 - North Flow Path N Wall-2N, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2011-03-22	Analyzed By:	kg
QC Batch:	79658	Sample Preparation:	2011-03-22	Prepared By:	kg
Prep Batch:	67580				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		84.8	mg/Kg	1	100	85	70 - 130

Sample: 260678 - North Flow Path N Wall-2N, 20'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2011-03-23	Analyzed By:	ER
QC Batch:	79699	Sample Preparation:	2011-03-23	Prepared By:	ER
Prep Batch:	67610				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	¹	2.66	mg/Kg	1	2.00	133	70 - 130
4-Bromofluorobenzene (4-BFB)		2.48	mg/Kg	1	2.00	124	70 - 130

Sample: 260679 - North Flow Path S Wall-2N, 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2011-03-22	Analyzed By:	kg
QC Batch:	79658	Sample Preparation:	2011-03-22	Prepared By:	kg
Prep Batch:	67580				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		592	mg/Kg	1	50.0

¹High surrogate recovery. Sample non-detect, result bias high.

Report Date: March 24, 2011
2001-11193

Work Order: 11031607
South Monument Gathering Sour

Page Number: 5 of 8
South of Monument, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		127	mg/Kg	1	100	127	70 - 130

Sample: 260679 - North Flow Path S Wall-2N, 20'

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79699 Date Analyzed: 2011-03-23 Analyzed By: ER
Prep Batch: 67610 Sample Preparation: 2011-03-23 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		85.5	mg/Kg	2	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.68	mg/Kg	2	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)	²	3.12	mg/Kg	2	2.00	156	70 - 130

Method Blank (1) QC Batch: 79658

QC Batch: 79658 Date Analyzed: 2011-03-22 Analyzed By: kg
Prep Batch: 67580 QC Preparation: 2011-03-22 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<15.7	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		80.8	mg/Kg	1	100	81	70 - 130

Method Blank (1) QC Batch: 79699

QC Batch: 79699 Date Analyzed: 2011-03-23 Analyzed By: ER
Prep Batch: 67610 QC Preparation: 2011-03-23 Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
GRO		<0.446	mg/Kg	2

²High surrogate recovery due to peak interference.

Report Date: March 24, 2011
2001-11193

Work Order: 11031607
South Monument Gathering Sour

Page Number: 6 of 8
South of Monument, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.11	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)		1.89	mg/Kg	1	2.00	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 79658
Prep Batch: 67580

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	222	mg/Kg	1	250	<15.7	89	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	250	mg/Kg	1	250	<15.7	100	47.5 - 144.1	12	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	92.4	91.3	mg/Kg	1	100	92	91	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 79699
Prep Batch: 67610

Date Analyzed: 2011-03-23
QC Preparation: 2011-03-23

Analyzed By: ER
Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	21.2	mg/Kg	1	20.0	<0.446	106	70 - 130

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	21.2	mg/Kg	1	20.0	<0.446	106	70 - 130	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
Trifluorotoluene (TFT)	1.89	1.91	mg/Kg	1	2.00	94	96	70 - 130
4-Bromofluorobenzene (4-BFB)	1.86	1.92	mg/Kg	1	2.00	93	96	70 - 130

Report Date: March 24, 2011
2001-11193

Work Order: 11031607
South Monument Gathering Sour

Page Number: 7 of 8
South of Monument, NM

Matrix Spike (MS-1) Spiked Sample: 260596

QC Batch: 79658
Prep Batch: 67580

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	200	mg/Kg	1	250	<15.7	80	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	193	mg/Kg	1	250	<15.7	77	11.7 - 152.3	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
n-Tricosane	87.1	87.9	mg/Kg	1	100	87	88	70 - 130

Matrix Spike (xMS-1) Spiked Sample:

QC Batch: 79699
Prep Batch: 67610

Date Analyzed: 2011-03-23
QC Preparation: 2011-03-23

Analyzed By: ER
Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	25.7	mg/Kg	1	20.0	2.25	117	70 - 130

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	25.9	mg/Kg	1	20.0	2.25	118	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)	2.20	2.12	mg/Kg	1	2	110	106	70 - 130
4-Bromofluorobenzene (4-BFB)	2.22	2.11	mg/Kg	1	2	111	106	70 - 130

Standard (CCV-2)

QC Batch: 79658

Date Analyzed: 2011-03-22

Analyzed By: kg

Report Date: March 24, 2011
2001-11193

Work Order: 11031607
South Monument Gathering Sour

Page Number: 8 of 8
South of Monument, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	204	82	80 - 120	2011-03-22

Standard (CCV-3)

QC Batch: 79658

Date Analyzed: 2011-03-22

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	231	92	80 - 120	2011-03-22

Standard (CCV-1)

QC Batch: 79699

Date Analyzed: 2011-03-23

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.09	109	80 - 120	2011-03-23

Standard (CCV-2)

QC Batch: 79699

Date Analyzed: 2011-03-23

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.06	106	80 - 120	2011-03-23

LAB Order ID # 11031607

260678-679

Page of

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
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Tel (432) 689-6301
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BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750
1 (888) 588-3443

email: lab@traceanalysis.com

Company Name:	Nova Safety & Environmental	Phone #:	432-894-7166
Address:	(Street, City, Zip)	Fax #:	
Contact Person:	Ron Rainsville	E-mail:	rrainsville@novasafety.com
Invoice to:	2057 Commerce		
(If different from above)	Plains		
Project #:	SRS# 2001-11193	Project Name:	S. Mont. Bath. Soil
Project Location (including state):	Monument, N.H.	Sampler Signature:	M. H. Green

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		Turn Around Time	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME		
260678	North Flow Path	1	4oz	X								X		3-16-11	9:15		
260679	N. Wall-2N, 20'	1	4oz	X								X		3-16-11	9:20		
679	S. Wall-2N, 20'																

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR
Matthew Green	Nova	3-16-11	11:16	Trace	3/16/11	11:16				
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	REMARKS:
Initials: ☒ N	2 All
Headspace Y/N/NA: ☒ Y	Tested - Acidified
Log in Review: ☒ Y	GRU-LABOK
Dry Weight Basis Required: ☐	
TRRP Report Required: ☐	
Check if Special Reporting Limits Are Needed: ☐	

TRACE ANALYSIS, INC.

1700 Alameda Avenue, Suite 9 Lubbock, Texas 79424 Tel: 806•664•1200 Fax: 806•664•1202
 2005 Alameda Avenue, Suite 9 El Paso, Texas 79902 Tel: 915•645•4443 Fax: 915•645•4443
 5102 Alameda Avenue, Suite 4 Amarillo, Texas 79102 Tel: 806•667•6673 Fax: 806•667•6673
 1000 Alameda Avenue, Suite 10 Midland, Texas 79703 Tel: 409•687•6673 Fax: 409•687•6673

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX **El Paso:** T104704221-08-TX **Midland:** T104704392-08-TX
 LELAP-02003 LELAP-02002
 Kansas E-10317

Analytical and Quality Control Report

E-mail Reports
 Nova Safety & Environmental
 2057 Commerce St.
 Midland, TX. 79703

Report Date: March 28, 2011

Work Order: 11032526



Project Location: South of Monument, NM
 Project Name: South Monument Gathering Sour
 Project Number: 2001-11193

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
261797	N Flow Path S Wall 2NB, 20'	soil	2011-03-25	12:10	2011-03-25

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.

This report consists of a total of 7 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project South Monument Gathering Sour were received by TraceAnalysis, Inc. on 2011-03-25 and assigned to work order 11032526. Samples for work order 11032526 were received intact at a temperature of 27.1 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	67703	2011-03-25 at 14:35	79794	2011-03-25 at 14:35
TPH GRO	S 8015 D	67697	2011-03-25 at 16:03	79788	2011-03-26 at 02:07

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 11032526 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.

Sample was received without ice.

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.

Report Date: March 28, 2011
2001-11193

Work Order: 11032526
South Monument Gathering Sour

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South of Monument. NM

Analytical Report

Sample: 261797 - N Flow Path S Wall 2NB, 20'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 79794 Date Analyzed: 2011-03-25 Analyzed By: kg
Prep Batch: 67703 Sample Preparation: 2011-03-25 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		103	mg/Kg	1	100	103	70 - 130

Sample: 261797 - N Flow Path S Wall 2NB, 20'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 79788 Date Analyzed: 2011-03-26 Analyzed By: ME
Prep Batch: 67697 Sample Preparation: 2011-03-25 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.67	mg/Kg	1	2.00	134	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.08	mg/Kg	1	2.00	104	42 - 159

Method Blank (1) QC Batch: 79788

QC Batch: 79788 Date Analyzed: 2011-03-26 Analyzed By: ME
Prep Batch: 67697 QC Preparation: 2011-03-25 Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<0.753	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.88	mg/Kg	1	2.00	94	67.6 - 150

continued ...

Report Date: March 28, 2011
2001-11193

Work Order: 11032526
South Monument Gathering Sour

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South of Monument, NM

method blank continued . . .

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		1.48	mg/Kg	1	2.00	74	52.4 - 130

Method Blank (1) QC Batch: 79794

QC Batch: 79794 Date Analyzed: 2011-03-25 Analyzed By: kg
Prep Batch: 67703 QC Preparation: 2011-03-25 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<15.7	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		97.5	mg/Kg	1	100	98	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 79788 Date Analyzed: 2011-03-26 Analyzed By: ME
Prep Batch: 67697 QC Preparation: 2011-03-25 Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	18.0	mg/Kg	1	20.0	<0.753	90	60.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	18.1	mg/Kg	1	20.0	<0.753	90	60.9 - 95.4	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)	2.09	1.90	mg/Kg	1	2.00	104	95	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.75	1.67	mg/Kg	1	2.00	88	84	68.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 79794 Date Analyzed: 2011-03-25 Analyzed By: kg
Prep Batch: 67703 QC Preparation: 2011-03-25 Prepared By: kg

Report Date: March 28, 2011
2001-11193

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South Monument Gathering Sour

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South of Monument, NM

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	262	mg/Kg	1	250	<15.7	105	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	275	mg/Kg	1	250	<15.7	110	47.5 - 144.1	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	110	118	mg/Kg	1	100	110	118	70 - 130

Matrix Spike (MS-1) Spiked Sample: 261797

QC Batch: 79788
Prep Batch: 67697

Date Analyzed: 2011-03-26
QC Preparation: 2011-03-25

Analyzed By: ME
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	20.7	mg/Kg	1	20.0	<0.753	104	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	20.8	mg/Kg	1	20.0	<0.753	104	61.8 - 114	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.66	2.72	mg/Kg	1	2	133	136	50 - 162
4-Bromofluorobenzene (4-BFB)	2.25	2.27	mg/Kg	1	2	112	114	50 - 162

Matrix Spike (MS-1) Spiked Sample: 261797

QC Batch: 79794
Prep Batch: 67703

Date Analyzed: 2011-03-25
QC Preparation: 2011-03-25

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	217	mg/Kg	1	250	<15.7	87	11.7 - 152.3

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

Report Date: March 28, 2011
2001-11193

Work Order: 11032526
South Monument Gathering Sour

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South of Monument, NM

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	205	mg/Kg	1	250	<15.7	82	11.7 - 152.3	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
n-Tricosane	111	120	mg/Kg	1	100	111	120	70 - 130

Standard (CCV-1)

QC Batch: 79788

Date Analyzed: 2011-03-26

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.06	106	80 - 120	2011-03-26

Standard (CCV-2)

QC Batch: 79788

Date Analyzed: 2011-03-26

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.02	102	80 - 120	2011-03-26

Standard (CCV-1)

QC Batch: 79794

Date Analyzed: 2011-03-25

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	284	114	80 - 120	2011-03-25

Standard (CCV-2)

QC Batch: 79794

Date Analyzed: 2011-03-25

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	277	111	80 - 120	2011-03-25

