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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

Kyle Summers
Talon LPE-Artesia
104 Hermosa Dr.
Artesia, NM, 88210

Report Date: December 23, 2009

Work Order: 9121611



Project Location: Lea Co., NM
Project Name: Denton SWD #5
Project Number: 701014.013.01

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
217390	Backfill 1	soil	2009-12-10	10:30	2009-12-16
217391	Backfill 2	soil	2009-12-10	10:31	2009-12-16
217392	Backfill 3	soil	2009-12-10	10:32	2009-12-16
217393	Backfill 4	soil	2009-12-10	10:33	2009-12-16
217394	Backfill 5	soil	2009-12-10	10:34	2009-12-16

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 17 pages and shall not be reproduced except in its entirety, without written approval of

TraceAnalysis, Inc.

A handwritten signature in black ink, appearing to read "Blair Leftwich". The signature is fluid and cursive, with a long horizontal stroke at the end.

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 Denton SWD #5 were received by TraceAnalysis, Inc. on 2009-12-16 and assigned to work order 9121611. Samples for work order 9121611 were received intact at a temperature of 3.4 deg. 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	56577	2009-12-21 at 15:00	66187	2009-12-21 at 12:51
Chloride (Titration)	SM 4500-Cl B	56470	2009-12-17 at 08:42	66072	2009-12-17 at 13:44
TPH DRO - NEW	Mod. 8015B	56461	2009-12-16 at 11:18	66055	2009-12-16 at 11:18
TPH GRO	S 8015B	56577	2009-12-21 at 15:00	66188	2009-12-21 at 13:19

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 9121611 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: 217390 - Backfill 1

Laboratory: Midland
Analysis: BTEX
QC Batch: 66187
Prep Batch: 56577

Analytical Method: S 8021B
Date Analyzed: 2009-12-21
Sample Preparation: 2009-12-21

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

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)		2.64	mg/Kg	1	2.00	132	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.19	mg/Kg	1	2.00	110	43.1 - 158.4

Sample: 217390 - Backfill 1

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 66072
Prep Batch: 56470

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-12-17
Sample Preparation: 2009-12-17

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 217390 - Backfill 1

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 66055
Prep Batch: 56461

Analytical Method: Mod. 8015B
Date Analyzed: 2009-12-16
Sample Preparation: 2009-12-16

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		107	mg/Kg	1	100	107	70 - 130

Sample: 217390 - Backfill 1

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 66188
Prep Batch: 56577

Analytical Method: S 8015B
Date Analyzed: 2009-12-21
Sample Preparation: 2009-12-21

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	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.61	mg/Kg	1	2.00	130	61.7 - 131.1

Sample: 217391 - Backfill 2

Laboratory: Midland
Analysis: BTEX
QC Batch: 66187
Prep Batch: 56577

Analytical Method: S 8021B
Date Analyzed: 2009-12-21
Sample Preparation: 2009-12-21

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

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)		2.36	mg/Kg	1	2.00	118	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.96	mg/Kg	1	2.00	98	43.1 - 158.4

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Sample: 217391 - Backfill 2

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2009-12-17	Analyzed By:	AR
QC Batch:	66072	Sample Preparation:	2009-12-17	Prepared By:	AR
Prep Batch:	56470				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 217391 - Backfill 2

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2009-12-16	Analyzed By:	kg
QC Batch:	66055	Sample Preparation:	2009-12-16	Prepared By:	kg
Prep Batch:	56461				

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: 217391 - Backfill 2

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2009-12-21	Analyzed By:	AG
QC Batch:	66188	Sample Preparation:	2009-12-21	Prepared By:	AG
Prep Batch:	56577				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		1.16	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.04	mg/Kg	1	2.00	102	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.14	mg/Kg	1	2.00	107	61.7 - 131.1

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Sample: 217392 - Backfill 3

Laboratory: Midland
Analysis: BTEX
QC Batch: 66187
Prep Batch: 56577

Analytical Method: S 8021B
Date Analyzed: 2009-12-21
Sample Preparation: 2009-12-21

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

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)		2.57	mg/Kg	1	2.00	128	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.09	mg/Kg	1	2.00	104	43.1 - 158.4

Sample: 217392 - Backfill 3

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 66072
Prep Batch: 56470

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-12-17
Sample Preparation: 2009-12-17

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 217392 - Backfill 3

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 66055
Prep Batch: 56461

Analytical Method: Mod. 8015B
Date Analyzed: 2009-12-16
Sample Preparation: 2009-12-16

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		107	mg/Kg	1	100	107	70 - 130

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Sample: 217392 - Backfill 3

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 66188
Prep Batch: 56577

Analytical Method: S 8015B
Date Analyzed: 2009-12-21
Sample Preparation: 2009-12-21

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)		2.21	mg/Kg	1	2.00	110	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.28	mg/Kg	1	2.00	114	61.7 - 131.1

Sample: 217393 - Backfill 4

Laboratory: Midland
Analysis: BTEX
QC Batch: 66187
Prep Batch: 56577

Analytical Method: S 8021B
Date Analyzed: 2009-12-21
Sample Preparation: 2009-12-21

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

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)		2.58	mg/Kg	1	2.00	129	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.09	mg/Kg	1	2.00	104	43.1 - 158.4

Sample: 217393 - Backfill 4

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 66072
Prep Batch: 56470

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-12-17
Sample Preparation: 2009-12-17

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

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Sample: 217393 - Backfill 4

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 66055 Date Analyzed: 2009-12-16 Analyzed By: kg
Prep Batch: 56461 Sample Preparation: 2009-12-16 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: 217393 - Backfill 4

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 66188 Date Analyzed: 2009-12-21 Analyzed By: AG
Prep Batch: 56577 Sample Preparation: 2009-12-21 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)		2.24	mg/Kg	1	2.00	112	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.28	mg/Kg	1	2.00	114	61.7 - 131.1

Sample: 217394 - Backfill 5

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 66187 Date Analyzed: 2009-12-21 Analyzed By: AG
Prep Batch: 56577 Sample Preparation: 2009-12-21 Prepared By: AG

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

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.64	mg/Kg	1	2.00	132	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.13	mg/Kg	1	2.00	106	43.1 - 158.4

Sample: 217394 - Backfill 5

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 66072 Date Analyzed: 2009-12-17 Analyzed By: AR
Prep Batch: 56470 Sample Preparation: 2009-12-17 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 217394 - Backfill 5

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 66055 Date Analyzed: 2009-12-16 Analyzed By: kg
Prep Batch: 56461 Sample Preparation: 2009-12-16 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		108	mg/Kg	1	100	108	70 - 130

Sample: 217394 - Backfill 5

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 66188 Date Analyzed: 2009-12-21 Analyzed By: AG
Prep Batch: 56577 Sample Preparation: 2009-12-21 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
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)		2.27	mg/Kg	1	2.00	114	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.36	mg/Kg	1	2.00	118	61.7 - 131.1

Method Blank (1) QC Batch: 66055

QC Batch: 66055
Prep Batch: 56461

Date Analyzed: 2009-12-16
QC Preparation: 2009-12-16

Analyzed By: kg
Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<5.86	mg/Kg	50

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

Method Blank (1) QC Batch: 66072

QC Batch: 66072
Prep Batch: 56470

Date Analyzed: 2009-12-17
QC Preparation: 2009-12-17

Analyzed By: AR
Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 66187

QC Batch: 66187
Prep Batch: 56577

Date Analyzed: 2009-12-21
QC Preparation: 2009-12-21

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00410	mg/Kg	0.01
Toluene		<0.00310	mg/Kg	0.01
Ethylbenzene		<0.00240	mg/Kg	0.01
Xylene		<0.00650	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.40	mg/Kg	1	2.00	120	64.9 - 142.7
4-Bromofluorobenzene (4-BFB)		1.95	mg/Kg	1	2.00	98	43.9 - 141.9

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Method Blank (1) QC Batch: 66188

QC Batch: 66188
Prep Batch: 56577

Date Analyzed: 2009-12-21
QC Preparation: 2009-12-21

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.396	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.13	mg/Kg	1	2.00	106	66.2 - 145
4-Bromofluorobenzene (4-BFB)		2.16	mg/Kg	1	2.00	108	62 - 120.5

Laboratory Control Spike (LCS-1)

QC Batch: 66055
Prep Batch: 56461

Date Analyzed: 2009-12-16
QC Preparation: 2009-12-16

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	266	mg/Kg	1	250	<5.86	106	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	272	mg/Kg	1	250	<5.86	109	57.4 - 133.4	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
n-Tricosane	110	112	mg/Kg	1	100	110	112	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 66072
Prep Batch: 56470

Date Analyzed: 2009-12-17
QC Preparation: 2009-12-17

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.7	mg/Kg	1	100	<2.18	99	85 - 115

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

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 66187
Prep Batch: 56577

Date Analyzed: 2009-12-21
QC Preparation: 2009-12-21

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.87	mg/Kg	1	2.00	<0.00410	94	75.4 - 115.7
Toluene	1.95	mg/Kg	1	2.00	<0.00310	98	78.4 - 113.6
Ethylbenzene	1.96	mg/Kg	1	2.00	<0.00240	98	76 - 114.2
Xylene	5.84	mg/Kg	1	6.00	<0.00650	97	76.9 - 113.6

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	1.84	mg/Kg	1	2.00	<0.00410	92	75.4 - 115.7	2	20
Toluene	1.93	mg/Kg	1	2.00	<0.00310	96	78.4 - 113.6	1	20
Ethylbenzene	1.93	mg/Kg	1	2.00	<0.00240	96	76 - 114.2	2	20
Xylene	5.76	mg/Kg	1	6.00	<0.00650	96	76.9 - 113.6	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)	2.42	2.32	mg/Kg	1	2.00	121	116	65 - 142.9
4-Bromofluorobenzene (4-BFB)	2.13	2.04	mg/Kg	1	2.00	106	102	43.8 - 144.9

Laboratory Control Spike (LCS-1)

QC Batch: 66188
Prep Batch: 56577

Date Analyzed: 2009-12-21
QC Preparation: 2009-12-21

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.1	mg/Kg	1	20.0	<0.396	76	52.5 - 114.3

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	15.4	mg/Kg	1	20.0	<0.396	77	52.5 - 114.3	2	20

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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	2.11	mg/Kg	1	2.00	109	106	66.2 - 148.7
4-Bromofluorobenzene (4-BFB)	2.36	2.30	mg/Kg	1	2.00	118	115	64.1 - 127.4

Matrix Spike (MS-1) Spiked Sample: 217098

QC Batch: 66055
Prep Batch: 56461

Date Analyzed: 2009-12-16
QC Preparation: 2009-12-16

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	239	mg/Kg	1	250	<5.86	96	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	238	mg/Kg	1	250	<5.86	95	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	98.4	100	mg/Kg	1	100	98	100	70 - 130

Matrix Spike (MS-1) Spiked Sample: 217394

QC Batch: 66072
Prep Batch: 56470

Date Analyzed: 2009-12-17
QC Preparation: 2009-12-17

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9740	mg/Kg	100	10000	<218	97	85 - 115

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
Chloride	9930	mg/Kg	100	10000	<218	99	85 - 115	2	20

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

Matrix Spike (MS-1) Spiked Sample: 217295

QC Batch: 66187
Prep Batch: 56577

Date Analyzed: 2009-12-21
QC Preparation: 2009-12-21

Analyzed By: AG
Prepared By: AG

Report Date: December 23, 2009
701014.013.01

Work Order: 9121611
Denton SWD #5

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.88	mg/Kg	1	2.00	<0.00410	94	57.7 - 140.7
Toluene	2.00	mg/Kg	1	2.00	<0.00310	100	53.4 - 146.6
Ethylbenzene	2.05	mg/Kg	1	2.00	<0.00240	102	62.1 - 141.6
Xylene	6.12	mg/Kg	1	6.00	<0.00650	102	61.2 - 142.7

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	2.01	mg/Kg	1	2.00	<0.00410	100	57.7 - 140.7	7	20
Toluene	2.15	mg/Kg	1	2.00	<0.00310	108	53.4 - 146.6	7	20
Ethylbenzene	2.20	mg/Kg	1	2.00	<0.00240	110	62.1 - 141.6	7	20
Xylene	6.56	mg/Kg	1	6.00	<0.00650	109	61.2 - 142.7	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
Trifluorotoluene (TFT)	2.57	2.62	mg/Kg	1	2	128	131	62.7 - 139.6
4-Bromofluorobenzene (4-BFB)	2.12	2.15	mg/Kg	1	2	106	108	49.6 - 146.7

Matrix Spike (MS-1) Spiked Sample: 217831

QC Batch: 66188
Prep Batch: 56577

Date Analyzed: 2009-12-21
QC Preparation: 2009-12-21

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.0	mg/Kg	1	20.0	<0.396	80	10 - 198.3

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
GRO	17.2	mg/Kg	1	20.0	<0.396	86	10 - 198.3	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
Trifluorotoluene (TFT)	2.10	2.22	mg/Kg	1	2	105	111	65.5 - 143
4-Bromofluorobenzene (4-BFB)	2.24	2.40	mg/Kg	1	2	112	120	58.6 - 140

Standard (CCV-2)

QC Batch: 66055

Date Analyzed: 2009-12-16

Analyzed By: kg

Report Date: December 23, 2009
701014.013.01

Work Order: 9121611
Denton SWD #5

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Lea Co., NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	274	110	80 - 120	2009-12-16

Standard (CCV-3)

QC Batch: 66055

Date Analyzed: 2009-12-16

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	2009-12-16

Standard (ICV-1)

QC Batch: 66072

Date Analyzed: 2009-12-17

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.6	100	85 - 115	2009-12-17

Standard (CCV-1)

QC Batch: 66072

Date Analyzed: 2009-12-17

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2009-12-17

Standard (CCV-1)

QC Batch: 66187

Date Analyzed: 2009-12-21

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	0.0909	91	80 - 120	2009-12-21
Toluene		mg/Kg	0.100	0.0947	95	80 - 120	2009-12-21
Ethylbenzene		mg/Kg	0.100	0.0951	95	80 - 120	2009-12-21
Xylene		mg/Kg	0.300	0.284	95	80 - 120	2009-12-21

Standard (CCV-2)

QC Batch: 66187

Date Analyzed: 2009-12-21

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	0.0828	83	80 - 120	2009-12-21
Toluene		mg/Kg	0.100	0.0865	86	80 - 120	2009-12-21
Ethylbenzene		mg/Kg	0.100	0.0859	86	80 - 120	2009-12-21
Xylene		mg/Kg	0.300	0.256	85	80 - 120	2009-12-21

Standard (CCV-1)

QC Batch: 66188

Date Analyzed: 2009-12-21

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	0.965	96	80 - 120	2009-12-21

Standard (CCV-2)

QC Batch: 66188

Date Analyzed: 2009-12-21

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	0.899	90	80 - 120	2009-12-21

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Invoice to: (If different from above) <i>Fasken Oil & Ranch LTD Attn: Jimmy Carlile</i>	
Project #: <i>701014.013.01</i>	Project Name: <i>Denton SWD #5</i>
Project Location (Including state): <i>Lea, NM</i>	Sampler Signature: <i>Tom Sawyer</i>

ANALYSIS REQUEST
(Circle or Specify Method No.)

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Tom Dewey Talon/LPE 12-14-09 11:52	Simon Hodge Talon/LPE 12-14-09 11:52	OBS _____
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| ☐ | Dry Weight Basis Required |
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