

1R - 454

REPORTS

DATE:

8/1/2005

Report Date: August 28, 2003
1014-01

Work Order: 3082115
Denton Gathering

Page Number: 1 of 1
Lovington, NM

Summary Report

RECEIVED

AUG 1 - 2005

OIL CONSERVATION
Report Date: August 28, 2003
DIVISION

Work Order: 3082115

Aaron Hale
BNC Midland
2135 South Loop 250 West
Midland, TX 79703

Project Location: Lovington, NM
Project Name: Denton Gathering
Project Number: 1014-01

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
15853	DE-22'	soil	2003-08-20	08:38	2003-08-21
15854	DENW-18'	soil	2003-08-20	08:45	2003-08-21
15855	DEW-W-18'	soil	2003-08-20	08:51	2003-08-21
15856	DEEW-18'	soil	2003-08-20	08:57	2003-08-21
15857	DESW-16'	soil	2003-08-20	09:29	2003-08-21
15858	EEB0-15'	soil	2003-08-20	09:40	2003-08-21
15859	EEB3-16'	soil	2003-08-20	09:44	2003-08-21
15860	EEB-15'	soil	2003-08-20	09:48	2003-08-21
15861	NB-8'	soil	2003-08-20	09:54	2003-08-21
15862	NBE-8'	soil	2003-08-20	09:56	2003-08-21
15863	SPF	soil	2003-08-20	10:06	2003-08-21
15864	SPG	soil	2003-08-20	10:11	2003-08-21
15865	SPH	soil	2003-08-20	10:15	2003-08-21

Sample - Field Code	BTX				TPH DRO DRO	TPH GRO GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (isomers) (mg/Kg)		
15853 - DE-22'	<0.0100	<0.0100	<0.0100	0.0394	<50.0	8.08
15854 - DENW-18'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
15855 - DEW-W-18'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
15856 - DEEW-18'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
15857 - DESW-16'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
15858 - EEB0-15'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
15859 - EEB3-16'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
15860 - EEB-15'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
15861 - NB-8'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
15862 - NBE-8'	<0.0200	<0.0200	<0.0200	<0.0200	505	<2.00
15863 - SPF	<0.0200	<0.0200	<0.0200	<0.0200	228	<2.00
15864 - SPG	<0.0200	<0.0200	<0.0200	0.0326	122	<2.00
15865 - SPH	<0.0100	<0.0100	0.0116	0.235	103	33.3

TRACE ANALYSIS, INC.

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Analytical and Quality Control Report

Aaron Hale
BNC Midland
2135 South Loop 250 West
Midland, TX 79703

Report Date: August 28, 2003

Work Order: 3082115

Project Location: Lovington, NM
Project Name: Denton Gathering
Project Number: 1014-01

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
15853	DE-22'	soil	2003-08-20	08:38	2003-08-21
15854	DENW-18'	soil	2003-08-20	08:45	2003-08-21
15855	DEW-W-18'	soil	2003-08-20	08:51	2003-08-21
15856	DEEW-18'	soil	2003-08-20	08:57	2003-08-21
15857	DESW-16'	soil	2003-08-20	09:29	2003-08-21
15858	EEB0-15'	soil	2003-08-20	09:40	2003-08-21
15859	EEB3-16'	soil	2003-08-20	09:44	2003-08-21
15860	EEB-15'	soil	2003-08-20	09:48	2003-08-21
15861	NB-8'	soil	2003-08-20	09:54	2003-08-21
15862	NBE-8'	soil	2003-08-20	09:56	2003-08-21
15863	SPF	soil	2003-08-20	10:06	2003-08-21
15864	SPG	soil	2003-08-20	10:11	2003-08-21
15865	SPH	soil	2003-08-20	10:15	2003-08-21

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



Dr. Blair Leftwich, Director

Analytical Report

Sample: 15853 - DE-22'

Analysis: BTEX
QC Batch: 3960
Prep Batch: 3552

Analytical Method: S 8021B
Date Analyzed: 2003-08-21
Date Prepared: 2003-08-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		0.0394	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.792	mg/Kg	10	0.100	79	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.862	mg/Kg	10	0.100	86	44.4 - 133

Sample: 15853 - DE-22'

Analysis: TPH DRO
QC Batch: 3976
Prep Batch: 3563

Analytical Method: Mod. 8015B
Date Analyzed: 2003-08-24
Date Prepared: 2003-08-22

Prep Method: N/A
Analyzed By: BP
Prepared By: DS

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-Triacontane		84.2	mg/Kg	1	150	56	45 - 152

Sample: 15853 - DE-22'

Analysis: TPH GRO
QC Batch: 3961
Prep Batch: 3552

Analytical Method: S 8015B
Date Analyzed: 2003-08-21
Date Prepared: 2003-08-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		8.08	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	¹	0.675	mg/Kg	10	0.100	68	73 - 120
4-Bromofluorobenzene (4-BFB)	²	0.521	mg/Kg	10	0.100	52	78 - 120

¹Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

²Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

Sample: 15854 - DENW-18'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 3960 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.749	mg/Kg	10	0.100	75	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.810	mg/Kg	10	0.100	81	44.4 - 133

Sample: 15854 - DENW-18'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 3976 Date Analyzed: 2003-08-24 Analyzed By: BP
Prep Batch: 3563 Date Prepared: 2003-08-22 Prepared By: DS

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-Triacontane		85.8	mg/Kg	1	150	57	45 - 152

Sample: 15854 - DENW-18'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 3961 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	³	0.658	mg/Kg	10	0.100	66	73 - 120
4-Bromofluorobenzene (4-BFB)	⁴	0.568	mg/Kg	10	0.100	57	78 - 120

Sample: 15855 - DEW-W-18'

³Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

⁴Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

Report Date: August 28, 2003
1014-01

Work Order: 3082115
Denton Gathering

Page Number: 4 of 22
Lovington, NM

Analysis: BTEX
QC Batch: 3960
Prep Batch: 3552

Analytical Method: S 8021B
Date Analyzed: 2003-08-21
Date Prepared: 2003-08-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.823	mg/Kg	10	0.100	82	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.828	mg/Kg	10	0.100	83	44.4 - 133

Sample: 15855 - DEW-W-18'

Analysis: TPH DRO
QC Batch: 3976
Prep Batch: 3563

Analytical Method: Mod. 8015B
Date Analyzed: 2003-08-24
Date Prepared: 2003-08-22

Prep Method: N/A
Analyzed By: BP
Prepared By: DS

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-Triacontane		82.8	mg/Kg	1	150	55	45 - 152

Sample: 15855 - DEW-W-18'

Analysis: TPH GRO
QC Batch: 3961
Prep Batch: 3552

Analytical Method: S 8015B
Date Analyzed: 2003-08-21
Date Prepared: 2003-08-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	⁵	0.721	mg/Kg	10	0.100	72	73 - 120
4-Bromofluorobenzene (4-BFB)	⁶	0.576	mg/Kg	10	0.100	58	78 - 120

Sample: 15856 - DEEW-18'

Analysis: BTEX
QC Batch: 3960

Analytical Method: S 8021B
Date Analyzed: 2003-08-21

Prep Method: S 5035
Analyzed By: BS

⁵Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

⁶Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

Prep Batch: 3552

Date Prepared: 2003-08-21

Prepared By: BS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.763	mg/Kg	10	0.100	76	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.836	mg/Kg	10	0.100	84	44.4 - 133

Sample: 15856 - DEEW-18'

Analysis: TPH DRO
QC Batch: 3976
Prep Batch: 3563

Analytical Method: Mod. 8015B
Date Analyzed: 2003-08-24
Date Prepared: 2003-08-22

Prep Method: N/A
Analyzed By: BP
Prepared By: DS

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-Triacontane		80.2	mg/Kg	1	150	53	45 - 152

Sample: 15856 - DEEW-18'

Analysis: TPH GRO
QC Batch: 4020
Prep Batch: 3601

Analytical Method: S 8015B
Date Analyzed: 2003-08-26
Date Prepared: 2003-08-26

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	⁷	0.676	mg/Kg	10	0.100	68	73 - 120
4-Bromofluorobenzene (4-BFB)	⁸	0.536	mg/Kg	10	0.100	54	78 - 120

Sample: 15857 - DESW-16'

Analysis: BTEX
QC Batch: 3960
Prep Batch: 3552

Analytical Method: S 8021B
Date Analyzed: 2003-08-21
Date Prepared: 2003-08-21

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

⁷Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

⁸Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.754	mg/Kg	10	0.100	75	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.750	mg/Kg	10	0.100	75	44.4 - 133

Sample: 15857 - DESW-16'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 3976 Date Analyzed: 2003-08-24 Analyzed By: BP
Prep Batch: 3563 Date Prepared: 2003-08-22 Prepared By: DS

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-Triacontane		84.4	mg/Kg	1	150	56	45 - 152

Sample: 15857 - DESW-16'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 3961 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	⁹	0.652	mg/Kg	10	0.100	65	73 - 120
4-Bromofluorobenzene (4-BFB)	¹⁰	0.521	mg/Kg	10	0.100	52	78 - 120

Sample: 15858 - EEB0-15'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 3960 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

⁹Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

¹⁰Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.808	mg/Kg	10	0.100	81	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.815	mg/Kg	10	0.100	82	44.4 - 133

Sample: 15858 - EEB0-15'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 3976 Date Analyzed: 2003-08-24 Analyzed By: BP
Prep Batch: 3563 Date Prepared: 2003-08-22 Prepared By: DS

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-Triacontane		87.3	mg/Kg	1	150	58	45 - 152

Sample: 15858 - EEB0-15'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 3961 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	¹¹	0.684	mg/Kg	10	0.100	68	73 - 120
4-Bromofluorobenzene (4-BFB)	¹²	0.565	mg/Kg	10	0.100	56	78 - 120

Sample: 15859 - EEB3-16'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 3960 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

¹¹Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

¹²Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.806	mg/Kg	10	0.100	81	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.795	mg/Kg	10	0.100	79	44.4 - 133

Sample: 15859 - EEB3-16'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 3976 Date Analyzed: 2003-08-24 Analyzed By: BP
Prep Batch: 3563 Date Prepared: 2003-08-22 Prepared By: DS

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-Triacontane		90.5	mg/Kg	1	150	60	45 - 152

Sample: 15859 - EEB3-16'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 3961 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	¹³	0.665	mg/Kg	10	0.100	66	73 - 120
4-Bromofluorobenzene (4-BFB)	¹⁴	0.559	mg/Kg	10	0.100	56	78 - 120

Sample: 15860 - EEB-15'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 3960 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

¹³Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

¹⁴Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.782	mg/Kg	10	0.100	78	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.761	mg/Kg	10	0.100	76	44.4 - 133

Sample: 15860 - EEB-15'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 3976 Date Analyzed: 2003-08-24 Analyzed By: BP
Prep Batch: 3563 Date Prepared: 2003-08-22 Prepared By: DS

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-Triacontane		83.4	mg/Kg	1	150	56	45 - 152

Sample: 15860 - EEB-15'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 3961 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	¹⁵	0.686	mg/Kg	10	0.100	69	73 - 120
4-Bromofluorobenzene (4-BFB)	¹⁶	0.531	mg/Kg	10	0.100	53	78 - 120

Sample: 15861 - NB-8'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 3960 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

¹⁵Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

¹⁶Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.801	mg/Kg	10	0.100	80	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.797	mg/Kg	10	0.100	80	44.4 - 133

Sample: 15861 - NB-8'

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 3976	Date Analyzed: 2003-08-24	Analyzed By: BP
Prep Batch: 3563	Date Prepared: 2003-08-22	Prepared By: DS

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-Triacontane		82.4	mg/Kg	1	150	55	45 - 152

Sample: 15861 - NB-8'

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 3961	Date Analyzed: 2003-08-21	Analyzed By: BS
Prep Batch: 3552	Date Prepared: 2003-08-21	Prepared By: BS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	¹⁷	0.683	mg/Kg	10	0.100	68	73 - 120
4-Bromofluorobenzene (4-BFB)	¹⁸	0.566	mg/Kg	10	0.100	57	78 - 120

Sample: 15862 - NBE-8'

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 3960	Date Analyzed: 2003-08-21	Analyzed By: BS
Prep Batch: 3552	Date Prepared: 2003-08-21	Prepared By: BS

¹⁷Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

¹⁸Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	19	<0.0200	mg/Kg	20	0.00100
Toluene		<0.0200	mg/Kg	20	0.00100
Ethylbenzene		<0.0200	mg/Kg	20	0.00100
Xylene (isomers)		<0.0200	mg/Kg	20	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	20	0.817	mg/Kg	20	0.100	41	58.9 - 129
4-Bromofluorobenzene (4-BFB)	21	0.838	mg/Kg	20	0.100	42	44.4 - 133

Sample: 15862 - NBE-8'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 3976 Date Analyzed: 2003-08-24 Analyzed By: BP
Prep Batch: 3563 Date Prepared: 2003-08-22 Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		505	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	116		mg/Kg	1	150	77	45 - 152

Sample: 15862 - NBE-8'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 3961 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	20	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	22	0.681	mg/Kg	20	0.100	34	73 - 120
4-Bromofluorobenzene (4-BFB)	23	0.591	mg/Kg	20	0.100	30	78 - 120

Sample: 15863 - SPF

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 3960 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

¹⁹Sample diluted due to turbidity.

²⁰Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

²¹Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

²²Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

²³Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	24	<0.0200	mg/Kg	20	0.00100
Toluene		<0.0200	mg/Kg	20	0.00100
Ethylbenzene		<0.0200	mg/Kg	20	0.00100
Xylene (isomers)		<0.0200	mg/Kg	20	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	25	0.832	mg/Kg	20	0.100	42	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.907	mg/Kg	20	0.100	45	44.4 - 133

Sample: 15863 - SPF

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 3976 Date Analyzed: 2003-08-24 Analyzed By: BP
Prep Batch: 3563 Date Prepared: 2003-08-22 Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		228	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		96.1	mg/Kg	1	150	64	45 - 152

Sample: 15863 - SPF

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 3961 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	20	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	26	0.736	mg/Kg	20	0.100	37	73 - 120
4-Bromofluorobenzene (4-BFB)	27	0.627	mg/Kg	20	0.100	31	78 - 120

Sample: 15864 - SPG

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 3960 Date Analyzed: 2003-08-21 Analyzed By: BS
Prep Batch: 3552 Date Prepared: 2003-08-21 Prepared By: BS

²⁴Sample diluted due to turbidity.

²⁵Low TFT surrogate recovery due to matrix interference. BFB surrogate recovery shows the method to be in control.

²⁶Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

²⁷Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	28	<0.0200	mg/Kg	20	0.00100
Toluene		<0.0200	mg/Kg	20	0.00100
Ethylbenzene		<0.0200	mg/Kg	20	0.00100
Xylene (isomers)		0.0326	mg/Kg	20	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	29	0.847	mg/Kg	20	0.100	42	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.895	mg/Kg	20	0.100	45	44.4 - 133

Sample: 15864 - SPG

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 3976 Date Analyzed: 2003-08-24 Analyzed By: BP
Prep Batch: 3563 Date Prepared: 2003-08-22 Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		122	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		91.5	mg/Kg	1	150	61	45 - 152

Sample: 15864 - SPG

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 4020 Date Analyzed: 2003-08-26 Analyzed By: MT
Prep Batch: 3601 Date Prepared: 2003-08-26 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	20	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	30	0.653	mg/Kg	20	0.100	33	73 - 120
4-Bromofluorobenzene (4-BFB)	31	0.568	mg/Kg	20	0.100	28	78 - 120

Sample: 15865 - SPH

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 4018 Date Analyzed: 2003-08-26 Analyzed By: MT
Prep Batch: 3601 Date Prepared: 2003-08-26 Prepared By: MT

²⁸Sample diluted due to turbidity.

²⁹Low TFT surrogate recovery due to matrix interference. BFB surrogate recovery shows the method to be in control.

³⁰Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

³¹Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		0.0116	mg/Kg	10	0.00100
Xylene (isomers)		0.235	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.911	mg/Kg	10	0.100	91	58.9 - 129
4-Bromofluorobenzene (4-BFB)		1.00	mg/Kg	10	0.100	100	44.4 - 133

Sample: 15865 - SPH

Analysis: TPH DRO
QC Batch: 3976
Prep Batch: 3563

Analytical Method: Mod. 8015B
Date Analyzed: 2003-08-24
Date Prepared: 2003-08-22

Prep Method: N/A
Analyzed By: BP
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		103	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		84.6	mg/Kg	1	150	56	45 - 152

Sample: 15865 - SPH

Analysis: TPH GRO
QC Batch: 4020
Prep Batch: 3601

Analytical Method: S 8015B
Date Analyzed: 2003-08-26
Date Prepared: 2003-08-26

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		33.3	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.782	mg/Kg	10	0.100	78	73 - 120
4-Bromofluorobenzene (4-BFB)		0.810	mg/Kg	10	0.100	81	78 - 120

Method Blank (1) QC Batch: 3960

Parameter	Flag	Result	Units	RL
Benzene		<0.0100	mg/Kg	0.001
Toluene		<0.0100	mg/Kg	0.001
Ethylbenzene		<0.0100	mg/Kg	0.001
Xylene (isomers)		<0.0100	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.978	mg/Kg	10	0.100	98	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.989	mg/Kg	10	0.100	99	44.4 - 133

Method Blank (1) QC Batch: 3961

Parameter	Flag	Result	Units	RL
GRO		<1.00	mg/Kg	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.957	mg/Kg	10	0.100	96	73 - 120
4-Bromofluorobenzene (4-BFB)	32	0.685	mg/Kg	10	0.100	68	78 - 120

Method Blank (1) QC Batch: 3976

Parameter	Flag	Result	Units	RL
DRO		<50.0	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		97.7	mg/Kg	1	150	65	45 - 152

Method Blank (1) QC Batch: 4018

Parameter	Flag	Result	Units	RL
Benzene		<0.0100	mg/Kg	0.001
Toluene		<0.0100	mg/Kg	0.001
Ethylbenzene		<0.0100	mg/Kg	0.001
Xylene (isomers)		<0.0100	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.10	mg/Kg	10	0.100	110	58.9 - 129
4-Bromofluorobenzene (4-BFB)		1.04	mg/Kg	10	0.100	104	44.4 - 133

Method Blank (1) QC Batch: 4020

Parameter	Flag	Result	Units	RL
GRO		<1.00	mg/Kg	0.1

³²Low BFB surrogate recovery due to unknown anomaly. ICV/CCV show the method to be in control.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.942	mg/Kg	10	0.100	94	73 - 120
4-Bromofluorobenzene (4-BFB)	33	0.651	mg/Kg	10	0.100	65	78 - 120

Laboratory Control Spike (LCS-1) QC Batch: 3960

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.990	0.934	mg/Kg	10	0.100	<0.00131	99	6	83.4 - 112	35
Toluene	0.977	0.930	mg/Kg	10	0.100	<0.00365	98	5	82.6 - 112	36
Ethylbenzene	0.979	0.921	mg/Kg	10	0.100	<0.00492	98	6	80.3 - 114	40
Xylene (isomers)	2.95	2.75	mg/Kg	10	0.300	<0.00314	98	7	78.9 - 114	39

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.898	1.00	mg/Kg	10	0.100	90	100	74.7 - 114
4-Bromofluorobenzene (4-BFB)	0.959	0.975	mg/Kg	10	0.100	96	98	76.2 - 110

Laboratory Control Spike (LCS-1) QC Batch: 3961

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	9.41	9.11	mg/Kg	10	1.00	<0.381	94	3	76.3 - 125	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)	1.08	1.07	mg/Kg	10	0.100	108	107	73.7 - 114
4-Bromofluorobenzene (4-BFB)	0.714	0.720	mg/Kg	10	0.100	71	72	76.2 - 110

Laboratory Control Spike (LCS-1) QC Batch: 3976

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	284	252	mg/Kg	1	250	<21.1	114	12	68 - 126	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-Triacontane	99.1	93.4	mg/Kg	1	150	66	62	33 - 144

Laboratory Control Spike (LCS-1) QC Batch: 4018

³³Low surrogate recovery due to unknown anomaly. ICV/CCV show the method to be in control.

³⁴Low BFB surrogate recovery due to unknown anomaly. TFT surrogate recovery shows the method to be in control.

³⁵Low BFB surrogate recovery due to unknown anomaly. TFT surrogate recovery shows the method to be in control.

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	1.04	1.04	mg/Kg	10	0.100	<0.00131	104	0	83.4 - 112	35
Toluene	1.03	1.04	mg/Kg	10	0.100	<0.00365	103	1	82.6 - 112	36
Ethylbenzene	1.03	1.05	mg/Kg	10	0.100	<0.00492	103	2	80.3 - 114	40
Xylene (isomers)	3.08	3.15	mg/Kg	10	0.300	<0.00314	103	2	78.9 - 114	39

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)	1.14	1.12	mg/Kg	10	0.100	114	112	74.7 - 114
4-Bromofluorobenzene (4-BFB)	1.08	1.08	mg/Kg	10	0.100	108	108	76.2 - 110

Laboratory Control Spike (LCS-1) QC Batch: 4020

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	10.3	10.0	mg/Kg	10	1.00	<0.381	103	3	76.3 - 125	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)	1.04	0.991	mg/Kg	10	0.100	104	99	73.7 - 114
4-Bromofluorobenzene (4-BFB)	3637 0.718	0.682	mg/Kg	10	0.100	72	68	76.2 - 110

Matrix Spike (MS-1) QC Batch: 3960

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.783	0.794	mg/Kg	10	0.100	<0.00131	78	1	58 - 107	22
Toluene	0.811	0.815	mg/Kg	10	0.100	<0.00365	81	0	59 - 110	20
Ethylbenzene	0.809	0.818	mg/Kg	10	0.100	<0.00492	81	1	58.4 - 113	15
Xylene (isomers)	2.43	2.47	mg/Kg	10	0.300	<0.00314	81	2	54.3 - 114	19

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.807	0.786	mg/Kg	10	0.1	81	79	50.6 - 114
4-Bromofluorobenzene (4-BFB)	0.831	0.832	mg/Kg	10	0.1	83	83	52 - 110

Matrix Spike (MS-1) QC Batch: 3961

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	7.11	7.28	mg/Kg	10	1.00	<0.381	71	2	32.9 - 152	20

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

³⁶Low BFB surrogate recovery due to unknown anomaly. TFT surrogate recovery shows the method to be in control.

³⁷Low surrogate recovery due to unknown anomaly. TFT surrogate recovery shows the method to be in control.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	³⁸	0.630	0.585	mg/Kg	10	0.1	63	58	50.6 - 114
4-Bromofluorobenzene (4-BFB)	³⁹	0.609	0.619	mg/Kg	10	0.1	61	62	52 - 110

Matrix Spike (MS-1) QC Batch: 3976

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	253	252	mg/Kg	1	250	<21.1	101	0	65 - 114	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-Triacontane		81.3	82.6	mg/Kg	1	150	54	55	33 - 144

Matrix Spike (MS-1) QC Batch: 4020

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	5.23	5.10	mg/Kg	10	1.00	<0.381	52	2	32.9 - 152	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)	⁴⁰	0.601	0.579	mg/Kg	10	0.1	60	58	50.6 - 114
4-Bromofluorobenzene (4-BFB)	⁴¹	0.576	0.558	mg/Kg	10	0.1	58	56	52 - 110

Standard (ICV-1) QC Batch: 3960

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0971	97	85 - 115	2003-08-21
Toluene		mg/L	0.100	0.0974	97	85 - 115	2003-08-21
Ethylbenzene		mg/L	0.100	0.0986	99	85 - 115	2003-08-21
Xylene (isomers)		mg/L	0.300	0.295	98	85 - 115	2003-08-21

Standard (CCV-1) QC Batch: 3960

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0992	99	85 - 115	2003-08-21
Toluene		mg/L	0.100	0.0997	100	85 - 115	2003-08-21
Ethylbenzene		mg/L	0.100	0.0995	100	85 - 115	2003-08-21

continued ...

³⁸Surrogate values within acceptable range.

³⁹Surrogate values within acceptable range.

⁴⁰Surrogate recovery within acceptable range.

⁴¹Surrogate recovery within acceptable range.

standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Xylene (isomers)		mg/L	0.300	0.302	101	85 - 115	2003-08-21

Standard (CCV-2) QC Batch: 3960

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0975	98	85 - 115	2003-08-21
Toluene		mg/L	0.100	0.0976	98	85 - 115	2003-08-21
Ethylbenzene		mg/L	0.100	0.0964	96	85 - 115	2003-08-21
Xylene (isomers)		mg/L	0.300	0.288	96	85 - 115	2003-08-21

Standard (ICV-1) QC Batch: 3961

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO	⁴²	mg/L	2.00	2.12	106	85 - 115	2003-08-21

Standard (CCV-1) QC Batch: 3961

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.08	108	85 - 115	2003-08-21

Standard (ICV-1) QC Batch: 3976

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	258	103	75 - 125	2003-08-24

Standard (CCV-1) QC Batch: 3976

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	247	99	75 - 125	2003-08-24

Standard (CCV-2) QC Batch: 3976

⁴²Changed spike amount from 1 to 2 due to

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	270	108	75 - 125	2003-08-24

Standard (ICV-1) QC Batch: 4018

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0922	92	85 - 115	2003-08-26
Toluene		mg/L	0.100	0.0921	92	85 - 115	2003-08-26
Ethylbenzene		mg/L	0.100	0.0941	94	85 - 115	2003-08-26
Xylene (isomers)		mg/L	0.300	0.281	94	85 - 115	2003-08-26

Standard (CCV-1) QC Batch: 4018

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0994	99	85 - 115	2003-08-26
Toluene		mg/L	0.100	0.101	101	85 - 115	2003-08-26
Ethylbenzene		mg/L	0.100	0.102	102	85 - 115	2003-08-26
Xylene (isomers)		mg/L	0.300	0.306	102	85 - 115	2003-08-26

Standard (ICV-1) QC Batch: 4020

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.984	98	85 - 115	2003-08-26

Standard (CCV-1) QC Batch: 4020

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.14	114	85 - 115	2003-08-26

Page 1 of 2

TraceAnalysis, Inc.

8700 N. Highway 100, Suite 100
Las Vegas, NV 89134
Tel: (702) 735-1000
Fax: (702) 735-1001
E-Mail: info@traceanalysis.com

Company Name: **DMC ENVIRONMENTAL** Phone #: **702 686 0016**
Address: **2135 S. 4800 W. WEST MINERAL, UT 84601**
Contact Person: **MASS, MALE**
Project Name: **ENVIRONMENTAL MONITORING**
Project Location: **LOVELL, NM**

Project Number: **1014**
Project Name: **ENVIRONMENTAL MONITORING**
Project Location: **LOVELL, NM**

LAB USE ONLY

LAB #	FIELD CODE	# CONTAINERS	MATRIX	PRESERVATIVE	DATE	TIME	ANALYSIS REQUEST	REMARKS
5853	DE - 2.2'	1	SLUDGE	✓	8/28/03	1415	✓	
55	DE - 18'	1	SLUDGE	✓	8/28/03	1415	✓	
56	DE - 18'	1	SLUDGE	✓	8/28/03	1415	✓	
57	DE - 16'	1	SLUDGE	✓	8/28/03	1415	✓	
58	DE - 15'	1	SLUDGE	✓	8/28/03	1415	✓	
59	DE - 14'	1	SLUDGE	✓	8/28/03	1415	✓	
60	DE - 15'	1	SLUDGE	✓	8/28/03	1415	✓	
61	DE - 8'	1	SLUDGE	✓	8/28/03	1415	✓	
62	DE - 8'	1	SLUDGE	✓	8/28/03	1415	✓	
63	DE - 8'	1	SLUDGE	✓	8/28/03	1415	✓	

Requisitioned by: **MASS, MALE** Date: **8/28/03** Time: **1415**
Requisitioned by: **MASS, MALE** Date: **8/28/03** Time: **1730**

Original Copy

Page Number: 22 of 22
Lovington,NM

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

TraceAnalysis, Inc.

155 McCutcheon Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 586-3443

Company Name:

BNC ENVIRONMENTAL

Phone #:

432 686 0086

Address: (Street, City, Zip)

2135 S. LOOP 250 WEST MIDLAND, TX 432 686 0186

Contact Person:

AARON HALL

Invoice to:

(If different from above)

Project #:

1014

Project Name:

BP DENTON GATHERING

Sampler Signature:

UM

Project Location:

LOVINGTON NM

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
15843	DE - 22'	1	402	✓								✓		8/20/03	0838
541	DENW - 18'	1		✓								✓			0848
55	DEW - 18'	1		✓								✓			0850
56	DEEW - 18'	1		✓								✓			0855
57	DESW - 16'	1		✓								✓			0929
58	EEB 2 - 15'	1		✓								✓			0940
59	EEB 3 - 16'	1		✓								✓			0944
60	EEB - 15'	1		✓								✓			0948
61	NB - 8'	1		✓								✓			0954
62	NBE - 8'	1		✓								✓			0956
63	SPF	1		✓								✓			1006

Relinquished by:

Date: 8/20/03

Time: 1415

Received by:

Date: 8/20/03

Time: 1415

Relinquished by:

Date: 8/20/03

Time: 1730

Received by:

Date: 8/20/03

Time: 1415

Relinquished by:

Date: 8/20/03

Time: 1730

Received by:

Date: 8/20/03

Time: 1415

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

303215

ANALYSIS REQUEST

(Circle or Specify Method No.)

PAH 8270C	✓
TPH 418.1/TX1005	✓
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	✓
TCRP Metals Ag As Ba Cd Cr Pb Se Hg	✓
TCRP Volatiles	✓
TCRP Semi Volatiles	✓
TCRP Pesticides	✓
HCl	✓
GC/MS Vol. 8260B/624	✓
GC/MS Semi. Vol. 8270C/625	✓
PCBs 8082/608	✓
Pesticides 8081A/608	✓
BOD, TSS, pH	✓

TPH 8015 Modified (DRO/620)

Hold

Turn Around Time if different from standard

REMARKS:

LAB USE ONLY

Intact	Y / N
Headspace	Y / N
Temp	2 C
Log-in Review	MA

☐ Check if Special Reporting Limits Are Needed

Submission of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 11 samples - 15

ORIGINAL COPY

Carrier #

Grayhound 66130 4384

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
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TraceAnalysis, Inc.

155 McCutcheon Suite H
El Paso, Texas 79932
Tel (915) 585-3443
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1 (888) 588-3443

Company Name:

BNC ENVIRONMENTAL

Phone #:

432-686-0086

Address:

(Street, City, Zip)

Fax #:

2135 S. LOOP 250W MIDLAND, TX 79703 432-686-0186

Contact Person:

ANNE HALL

Invoice to:

If different from above)

Project #:

1014

Project Name:

BP DARTON GATHERING

Project Location:

LORISTON NM

Sampler Signature:

Wm

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	DATE	TIME
15824	SPG	1	402	✓							✓		8/20/03	1011
15825	SPH	1	402	✓							✓		8/20/03	1015

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

2135/115

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	✓
BTEX 8021B/602	✓
TPH 418.1/TX1005	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCBs 8082/608	
Pesticides 8081A/608	
RDD, TSS, PH	
Turn Around Time if different from standard	

TPH 8015 MODIFIED (DRO/CAO)

REMARKS:

LAB USE ONLY

Intact ☒ Y ☐ N
Headspace Y / N
Temp 22°
Log-in Review MM

☐ Check If Special Reporting Limits Are Needed

Carrier # 166130-438-1

ORIGINAL COPY

Report Date: July 24, 2003
1014-01

Work Order: 3071729
Denton Gathering

Page Number: 1 of 1
Lovington, NM

Summary Report

Aaron Hale
BNC Midland
2135 South Loop 250 West
Midland, TX 79703

Report Date: July 24, 2003

Work Order: 3071729

Project Location: Lovington, NM
Project Name: Denton Gathering
Project Number: 1014-01

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
13252	NW NW (18')	soil	2003-07-15	12:45	2003-07-17

Sample - Field Code	BTEX				TPH DRO	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (isomers) (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
13252 - NW NW (18')	0.163	4.81	5.86	51.6	4430	690



TRACE ANALYSIS, INC.

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Analytical and Quality Control Report

Aaron Hale
BNC Midland
2135 South Loop 250 West
Midland, TX 79703

Report Date: July 24, 2003

Work Order: 3071729

Project Location: Lovington, NM
Project Name: Denton Gathering
Project Number: 1014-01

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
13252	NW NW (18')	soil	2003-07-15	12:45	2003-07-17

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


Dr. Blair Leftwich, Director

Analytical Report

Sample: 13252 - NW NW (18')

Analysis: BTEX
QC Batch: 3100
Prep Batch: 2796

Analytical Method: S 8021B
Date Analyzed: 2003-07-21
Date Prepared: 2003-07-21

Prep Method: S 5035
Analyzed By:
Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.163	mg/Kg	50	0.00100
Toluene		4.81	mg/Kg	50	0.00100
Ethylbenzene		5.86	mg/Kg	50	0.00100
Xylene (isomers)	1	51.6	mg/Kg	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	2	0.800	mg/Kg	50	0.100	16	58.9 - 129
4-Bromofluorobenzene (4-BFB)	3	13.0	mg/Kg	50	0.100	260	44.4 - 133

Sample: 13252 - NW NW (18')

Analysis: TPH DRO
QC Batch: 3192
Prep Batch: 2881

Analytical Method: Mod. 8015B
Date Analyzed: 2003-07-23
Date Prepared: 2003-07-23

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

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		4430	mg/Kg	10	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	4	174	mg/Kg	10	150	12	45 - 152

Sample: 13252 - NW NW (18')

Analysis: TPH GRO
QC Batch: 3101
Prep Batch: 2796

Analytical Method: S 8015B
Date Analyzed: 2003-07-21
Date Prepared: 2003-07-21

Prep Method: S 5035
Analyzed By:
Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		690	mg/Kg	50	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	5	1.89	mg/Kg	50	0.100	38	73 - 120

continued ...

¹Estimated concentration value is greater than the standard curve.

²Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

³High surrogate recovery due to peak interference.

⁴Surrogate recovery out of range due to matrix effects. QC show the process within control.

⁵Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

sample continued ...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)	⁶	34.6	mg/Kg	50	0.100	692	78 - 120

Method Blank (1) QC Batch: 3100

Parameter	Flag	Result	Units	RL
Benzene		<0.0100	mg/Kg	0.001
Toluene		<0.0100	mg/Kg	0.001
Ethylbenzene		<0.0100	mg/Kg	0.001
Xylene (isomers)		<0.0100	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.937	mg/Kg	10	0.100	94	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.954	mg/Kg	10	0.100	95	44.4 - 133

Method Blank (1) QC Batch: 3101

Parameter	Flag	Result	Units	RL
GRO		1.60	mg/Kg	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.970	mg/Kg	10	0.100	97	73 - 120
4-Bromofluorobenzene (4-BFB)		1.02	mg/Kg	10	0.100	102	78 - 120

Method Blank (1) QC Batch: 3192

Parameter	Flag	Result	Units	RL
DRO		<50.0	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		93.9	mg/Kg	1	150	62	45 - 152

Laboratory Control Spike (LCS-1) QC Batch: 3100

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.920	0.903	mg/Kg	10	0.100	<0.00131	92	2	83.4 - 112	35
Toluene	0.939	0.919	mg/Kg	10	0.100	<0.00365	94	2	82.6 - 112	36

continued ...

⁶High surrogate recovery due to peak interference.

control spikes continued ...

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Ethylbenzene	0.956	0.934	mg/Kg	10	0.100	<0.00492	96	2	80.3 - 114	40
Xylene (isomers)	2.89	2.83	mg/Kg	10	0.300	<0.00314	96	2	78.9 - 114	39

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.917	0.884	mg/Kg	10	0.100	92	88	74.7 - 114
4-Bromofluorobenzene (4-BFB)	0.962	0.935	mg/Kg	10	0.100	96	94	76.2 - 110

Laboratory Control Spike (LCS-1) QC Batch: 3101

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	9.36	7.93	mg/Kg	10	1.00	<0.381	94	16	76.3 - 125	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)	1.13	1.02	mg/Kg	10	0.100	113	102	73.7 - 114
4-Bromofluorobenzene (4-BFB)	1.07	1.06	mg/Kg	10	0.100	107	106	76.2 - 110

Laboratory Control Spike (LCS-1) QC Batch: 3192

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	311	275	mg/Kg	1	250	<21.1	124	12	68 - 126	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-Triacontane	99.7	92.0	mg/Kg	1	150	66	61	33 - 144

Matrix Spike (MS-1) QC Batch: 3100

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.829	0.802	mg/Kg	10	0.100	<0.00131	83	3	58 - 107	22
Toluene	0.837	0.808	mg/Kg	10	0.100	<0.00365	84	4	59 - 110	20
Ethylbenzene	0.876	0.831	mg/Kg	10	0.100	<0.00492	88	5	58.4 - 113	15
Xylene (isomers)	2.59	2.48	mg/Kg	10	0.300	<0.00314	86	4	54.3 - 114	19

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.806	0.785	mg/Kg	10	0.1	81	78	50.6 - 114
4-Bromofluorobenzene (4-BFB)	0.850	0.824	mg/Kg	10	0.1	85	82	52 - 110

Matrix Spike (MS-1) QC Batch: 3101

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO ⁷⁸	578	575	mg/Kg	50	0.0200	689.756	-11174	0	32.9 - 152	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)	⁹¹⁰	2.07	15.5	mg/Kg	50	0.02	207	1550	50.6 - 114
4-Bromofluorobenzene (4-BFB)	¹¹¹²	29.2	27.0	mg/Kg	50	0.02	2920	2700	52 - 110

Matrix Spike (MS-1) QC Batch: 3192

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	194	210	mg/Kg	1	250	<21.1	78	8	65 - 114	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-Triacontane	97.5	102	mg/Kg	1	150	65	68	33 - 144

Standard (ICV-1) QC Batch: 3100

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0983	98	85 - 115	2003-07-21
Toluene		mg/L	0.100	0.0991	99	85 - 115	2003-07-21
Ethylbenzene		mg/L	0.100	0.100	100	85 - 115	2003-07-21
Xylene (isomers)		mg/L	0.300	0.303	101	85 - 115	2003-07-21

Standard (CCV-1) QC Batch: 3100

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0975	98	85 - 115	2003-07-21
Toluene		mg/L	0.100	0.0981	98	85 - 115	2003-07-21
Ethylbenzene		mg/L	0.100	0.0994	99	85 - 115	2003-07-21
Xylene (isomers)		mg/L	0.300	0.297	99	85 - 115	2003-07-21

Standard (ICV-1) QC Batch: 3101

⁷GRO recovery outside normal limits due to matrix interference. LCS, LCSD show the method to be in control.

⁸GRO recovery outside normal limits due to matrix interference. LCS, LCSD show the method to be in control.

⁹High surrogate recovery due to peak interference.

¹⁰High surrogate recovery due to peak interference.

¹¹High surrogate recovery due to peak interference.

¹²High surrogate recovery due to peak interference.

Report Date: July 24, 2003
1014-01

Work Order: 3071729
Denton Gathering

Page Number: 6 of 6
Lovington, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.994	99	85 - 115	2003-07-21

Standard (CCV-1) QC Batch: 3101

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.892	89	85 - 115	2003-07-21

Standard (ICV-1) QC Batch: 3192

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	286	114	75 - 125	2003-07-23

Standard (CCV-1) QC Batch: 3192

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	298	119	75 - 125	2003-07-23

Summary Report

Tom Larson
BNC Midland
2135 South Loop 250 West
Midland, TX 79703

Report Date: May 7, 2003

Work Order: 3050111

Project Location: Lovington, NM
Project Name: Denton Gathering
Project Number: 1014-01

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
6506	U 10	soil	2003-04-30	11:07	2003-05-01
6507	EWV 3'	soil	2003-04-30	12:15	2003-05-01
6508	EWV 3' B	soil	2003-04-30	11:04	2003-05-01
6509	LS 8'	soil	2003-04-30	11:15	2003-05-01
6510	EEV 3'	soil	2003-04-30	12:12	2003-05-01
6511	WV 2' B	soil	2003-04-30	10:58	2003-05-01
6512	SF 3'	soil	2003-04-30	12:10	2003-05-01
6513	EE Floor 5' B	soil	2003-04-30	11:01	2003-05-01
6514	EWV 8'	soil	2003-04-30	11:12	2003-05-01
6515	SV 3'	soil	2003-04-30	12:07	2003-05-01
6516	SVV 8'	soil	2003-04-30	11:16	2003-05-01
6517	WV 8'	soil	2003-04-30	11:18	2003-05-01
6518	Stockpile A	soil	2003-04-30	11:05	2003-05-01
6519	Stockpile B	soil	2003-04-30	11:10	2003-05-01
6520	Stockpile C	soil	2003-04-30	11:13	2003-05-01
6521	Stockpile D	soil	2003-04-30	11:17	2003-05-01
6522	Stockpile E	soil	2003-04-30	11:19	2003-05-01

Sample - Field Code	BTEX				TPH DRO	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (isomers) (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
6506 - U 10	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
6507 - EVV 3'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
6508 - EVV 3' B	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
6509 - LS 8'	<0.0200	0.0810	0.250	1.80	2380	80.0
6510 - EEV 3'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	4.20
6511 - WV 2' B	<0.0100	<0.0100	<0.0100	0.0150	<50.0	<1.00
6512 - SF 3'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
6513 - EE Floor 5' B	<0.0500	<0.0500	<0.0500	0.151	61.7	<5.00
6514 - EVV 8'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	3.04
6515 - SV 3'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
6516 - SVV 8'	<0.0200	0.0392	0.168	1.41	1630	56.7
6517 - WV 8'	<0.0100	<0.0100	<0.0100	0.0137	<50.0	<1.00
6518 - Stockpile A	<0.0100	<0.0100	0.114	0.757	<50.0	38.2
6519 - Stockpile B	<0.0100	<0.0100	1.52	9.14	151	260
6520 - Stockpile C	<0.0100	<0.0100	1.06	6.15	124	204
6521 - Stockpile D	<0.0100	<0.0100	1.16	5.71	75.0	194
6522 - Stockpile E	<0.0100	<0.0100	0.871	3.65	<50.0	221

TRACE ANALYSIS, INC.

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Analytical and Quality Control Report

Tom Larson
BNC Midland
2135 South Loop 250 West
Midland, TX 79703

Report Date: May 7, 2003

Work Order: 3050111

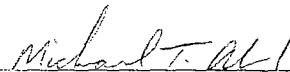
Project Location: Lovington, NM
Project Name: Denton Gathering
Project Number: 1014-01

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
6506	U 10	soil	2003-04-30	11:07	2003-05-01
6507	EW 3'	soil	2003-04-30	12:15	2003-05-01
6508	EW 3' B	soil	2003-04-30	11:04	2003-05-01
6509	LS 8'	soil	2003-04-30	11:15	2003-05-01
6510	EE 3'	soil	2003-04-30	12:12	2003-05-01
6511	WW 2' B	soil	2003-04-30	10:58	2003-05-01
6512	SF 3'	soil	2003-04-30	12:10	2003-05-01
6513	EE Floor 5' B	soil	2003-04-30	11:01	2003-05-01
6514	EW 8'	soil	2003-04-30	11:12	2003-05-01
6515	SW 3'	soil	2003-04-30	12:07	2003-05-01
6516	SW 8'	soil	2003-04-30	11:16	2003-05-01
6517	WW 8'	soil	2003-04-30	11:18	2003-05-01
6518	Stockpile A	soil	2003-04-30	11:05	2003-05-01
6519	Stockpile B	soil	2003-04-30	11:10	2003-05-01
6520	Stockpile C	soil	2003-04-30	11:13	2003-05-01
6521	Stockpile D	soil	2003-04-30	11:17	2003-05-01
6522	Stockpile E	soil	2003-04-30	11:19	2003-05-01

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


Dr. Blair Leftwich, Director

Analytical Report

Sample: 6506 - U 10

Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	1352	Date Analyzed:	2003-05-01	Analyzed By:	DK
Prep Batch:	1211	Date Prepared:	2003-05-01	Prepared By:	DK

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.786	mg/Kg	10	0.100	79	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.719	mg/Kg	10	0.100	72	44.4 - 133

Sample: 6506 - U 10

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	1387	Date Analyzed:	2003-05-03	Analyzed By:	BP
Prep Batch:	1237	Date Prepared:	2003-05-01	Prepared By:	WG

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-Triacontane		178	mg/Kg	1	150	118	83 - 174

Sample: 6506 - U 10

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	1353	Date Analyzed:	2003-05-01	Analyzed By:	DK
Prep Batch:	1211	Date Prepared:	2003-05-01	Prepared By:	DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.931	mg/Kg	10	0.100	93	73 - 120
4-Bromofluorobenzene (4-BFB)		0.78	mg/Kg	10	0.100	78	78 - 120

Sample: 6507 - EWW 3'

Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	1352	Date Analyzed:	2003-05-01	Analyzed By:	DK

Prep Batch: 1211

Date Prepared: 2003-05-01

Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	1	<0.0200	mg/Kg	20	0.00100
Toluene		<0.0200	mg/Kg	20	0.00100
Ethylbenzene		<0.0200	mg/Kg	20	0.00100
Xylene (isomers)		<0.0200	mg/Kg	20	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	2	0.501	mg/Kg	20	0.0500	50	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.446	mg/Kg	20	0.0500	45	44.4 - 133

Sample: 6507 - EWW 3'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

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-Triacontane	173		mg/Kg	1	150	115	83 - 174

Sample: 6507 - EWW 3'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	3	<2.00	mg/Kg	20	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	4	0.654	mg/Kg	20	0.0500	65	73 - 120
4-Bromofluorobenzene (4-BFB)	5	0.501	mg/Kg	20	0.0500	50	78 - 120

Sample: 6508 - EWC 3' B

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 1352 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

¹Sample diluted due to turbidity.

²Low surrogate due to prep. ICV, CCV show the method to be in control.

³Sample diluted due to turbidity.

⁴Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

⁵Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.632	mg/Kg	10	0.100	63	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.582	mg/Kg	10	0.100	58	44.4 - 133

Sample: 6508 - EWC 3' B

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

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-Triacontane		177	mg/Kg	1	150	118	83 - 174

Sample: 6508 - EWC 3' B

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.802	mg/Kg	10	0.100	80	73 - 120
4-Bromofluorobenzene (4-BFB)	6	0.635	mg/Kg	10	0.100	64	78 - 120

Sample: 6509 - LS 8'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 1352 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	7	<0.0200	mg/Kg	20	0.00100

continued ...

⁶Low surrogate recovery due to matrix interference.

⁷Sample diluted due to hydrocarbons beyond xylene. Sample has a benzene concentration of less than 0.00262 which is the MDL.

sample 6509 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Toluene		0.0810	mg/Kg	20	0.00100
Ethylbenzene		0.250	mg/Kg	20	0.00100
Xylene (isomers)		1.80	mg/Kg	20	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.82	mg/Kg	20	0.0500	82	58.9 - 129
4-Bromofluorobenzene (4-BFB)	8	1.38	mg/Kg	20	0.0500	138	44.4 - 133

Sample: 6509 - LS 8'

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 1387	Date Analyzed: 2003-05-03	Analyzed By: BP
Prep Batch: 1237	Date Prepared: 2003-05-01	Prepared By: WG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		2380	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		186	mg/Kg	1	150	124	83 - 174

Sample: 6509 - LS 8'

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 1353	Date Analyzed: 2003-05-01	Analyzed By: DK
Prep Batch: 1211	Date Prepared: 2003-05-01	Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		80.0	mg/Kg	20	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.977	mg/Kg	20	0.0500	98	73 - 120
4-Bromofluorobenzene (4-BFB)	9	2.07	mg/Kg	20	0.0500	207	78 - 120

Sample: 6510 - EEW 3'

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 1352	Date Analyzed: 2003-05-01	Analyzed By: DK
Prep Batch: 1211	Date Prepared: 2003-05-01	Prepared By: DK

continued ...

⁸High surrogate recovery due to peak interference.

⁹High surrogate recovery due to peak interference.

sample 6510 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	10	<0.0200	mg/Kg	20	0.00100
Toluene		<0.0200	mg/Kg	20	0.00100
Ethylbenzene		<0.0200	mg/Kg	20	0.00100
Xylene (isomers)		<0.0200	mg/Kg	20	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.981	mg/Kg	20	0.0500	98	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.755	mg/Kg	20	0.0500	76	44.4 - 133

Sample: 6510 - EEW 3'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

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-Triacontane		173	mg/Kg	1	150	116	83 - 174

Sample: 6510 - EEW 3'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		4.20	mg/Kg	20	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.14	mg/Kg	20	0.0500	114	73 - 120
4-Bromofluorobenzene (4-BFB)		0.841	mg/Kg	20	0.0500	84	78 - 120

Sample: 6511 - WWC 2' B

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 1352 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

¹⁰Sample diluted due to hydrocarbons beyond xylene. Sample has a benzene concentration of less than 0.00262 which is the MDL.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		0.0150	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.931	mg/Kg	10	0.100	93	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.745	mg/Kg	10	0.100	74	44.4 - 133

Sample: 6511 - WWC 2' B

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

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-Triacontane		183	mg/Kg	1	150	122	83 - 174

Sample: 6511 - WWC 2' B

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.909	mg/Kg	10	0.100	91	73 - 120
4-Bromofluorobenzene (4-BFB)		0.87	mg/Kg	10	0.100	87	78 - 120

Sample: 6512 - SF 3'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 1352 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100

continued ...

sample 6512 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.796	mg/Kg	10	0.100	80	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.708	mg/Kg	10	0.100	71	44.4 - 133

Sample: 6512 - SF 3'

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 1387	Date Analyzed: 2003-05-03	Analyzed By: BP
Prep Batch: 1237	Date Prepared: 2003-05-01	Prepared By: WG

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-Triacontane		177	mg/Kg	1	150	118	83 - 174

Sample: 6512 - SF 3'

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 1353	Date Analyzed: 2003-05-01	Analyzed By: DK
Prep Batch: 1211	Date Prepared: 2003-05-01	Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.995	mg/Kg	10	0.100	100	73 - 120
4-Bromofluorobenzene (4-BFB)	11	0.763	mg/Kg	10	0.100	76	78 - 120

Sample: 6513 - EE Floor 5' B

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 1352	Date Analyzed: 2003-05-01	Analyzed By: DK
Prep Batch: 1211	Date Prepared: 2003-05-01	Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	12	<0.0500	mg/Kg	50	0.00100
Toluene		<0.0500	mg/Kg	50	0.00100

continued ...

¹¹Low surrogate recovery due to matrix interference.

¹²Sample ran at a dilution due to hydrocarbons beyond xylene. Sample has a benzene concentration of less than 0.00655 which is the MDL.

sample 6513 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Ethylbenzene		<0.0500	mg/Kg	50	0.00100
Xylene (isomers)		0.151	mg/Kg	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.757	mg/Kg	50	0.0200	76	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.754	mg/Kg	50	0.0200	75	44.4 - 133

Sample: 6513 - EE Floor 5' B

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		61.7	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		175	mg/Kg	1	150	117	83 - 174

Sample: 6513 - EE Floor 5' B

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	13	<5.00	mg/Kg	50	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	14	0.697	mg/Kg	50	0.0200	70	73 - 120
4-Bromofluorobenzene (4-BFB)		0.968	mg/Kg	50	0.0200	97	78 - 120

Sample: 6514 - EWW 8'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 1352 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100

continued ...

¹³Sample diluted due to turbidity.

¹⁴Low surrogate recovery due to matrix interference.

sample 6514 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.798	mg/Kg	10	0.100	80	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.761	mg/Kg	10	0.100	76	44.4 - 133

Sample: 6514 - EWW 8'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

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-Triacontane		180	mg/Kg	1	150	120	83 - 174

Sample: 6514 - EWW 8'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		3.04	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.88	mg/Kg	10	0.100	88	73 - 120
4-Bromofluorobenzene (4-BFB)		0.863	mg/Kg	10	0.100	86	78 - 120

Sample: 6515 - SW 3'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 1352 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	¹⁵	<0.0200	mg/Kg	20	0.00100

continued ...

¹⁵Sample ran at a dilution due to turbidity.

sample 6515 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Toluene		<0.0200	mg/Kg	20	0.00100
Ethylbenzene		<0.0200	mg/Kg	20	0.00100
Xylene (isomers)		<0.0200	mg/Kg	20	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.826	mg/Kg	20	0.0500	83	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.656	mg/Kg	20	0.0500	66	44.4 - 133

Sample: 6515 - SW 3'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

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-Triacontane		178	mg/Kg	1	150	118	83 - 174

Sample: 6515 - SW 3'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	¹⁶	<2.00	mg/Kg	20	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.8	mg/Kg	20	0.0500	80	73 - 120
4-Bromofluorobenzene (4-BFB)	¹⁷	0.736	mg/Kg	20	0.0500	74	78 - 120

Sample: 6516 - SWW 8'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 1352 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

continued ...

¹⁶ Sample diluted due to turbidity.

¹⁷ Low surrogate recovery due matrix interference.

sample 6516 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	18	<0.0200	mg/Kg	20	0.00100
Toluene		0.0392	mg/Kg	20	0.00100
Ethylbenzene		0.168	mg/Kg	20	0.00100
Xylene (isomers)		1.41	mg/Kg	20	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.722	mg/Kg	20	0.0500	72	58.9 - 129
4-Bromofluorobenzene (4-BFB)		1.08	mg/Kg	20	0.0500	108	44.4 - 133

Sample: 6516 - SWW 8'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		1630	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		249	mg/Kg	1	150	166	83 - 174

Sample: 6516 - SWW 8'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		56.7	mg/Kg	20	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	19	0.676	mg/Kg	20	0.0500	68	73 - 120
4-Bromofluorobenzene (4-BFB)	20	1.42	mg/Kg	20	0.0500	142	78 - 120

Sample: 6517 - WWW 8'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 1352 Date Analyzed: 2003-05-01 Analyzed By: DK

¹⁸Sample ran at a dilution due to hydrocarbons beyond xylene.

¹⁹Low surrogate recovery due to matrix interference.

²⁰High surrogate recovery due to peak interference.

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Prep Batch: 1211

Date Prepared: 2003-05-01

Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		0.0137	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.961	mg/Kg	10	0.100	96	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.722	mg/Kg	10	0.100	72	44.4 - 133

Sample: 6517 - WWW 8'

Analysis: TPH DRO
QC Batch: 1387
Prep Batch: 1237

Analytical Method: Mod. 8015B
Date Analyzed: 2003-05-03
Date Prepared: 2003-05-01

Prep Method: N/A
Analyzed By: BP
Prepared By: WG

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-Triacontane		185	mg/Kg	1	150	124	83 - 174

Sample: 6517 - WWW 8'

Analysis: TPH GRO
QC Batch: 1353
Prep Batch: 1211

Analytical Method: S 8015B
Date Analyzed: 2003-05-01
Date Prepared: 2003-05-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.969	mg/Kg	10	0.100	97	73 - 120
4-Bromofluorobenzene (4-BFB)		0.782	mg/Kg	10	0.100	78	78 - 120

Sample: 6518 - Stockpile A

Analysis: BTEX
QC Batch: 1352
Prep Batch: 1211

Analytical Method: S 8021B
Date Analyzed: 2003-05-01
Date Prepared: 2003-05-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100

continued ...

sample 6518 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		0.114	mg/Kg	10	0.00100
Xylene (isomers)		0.757	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.822	mg/Kg	10	0.100	82	58.9 - 129
4-Bromofluorobenzene (4-BFB)		1.13	mg/Kg	10	0.100	113	44.4 - 133

Sample: 6518 - Stockpile A

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

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-Triacontane		179	mg/Kg	1	150	119	83 - 174

Sample: 6518 - Stockpile A

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		38.2	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.82	mg/Kg	10	0.100	82	73 - 120
4-Bromofluorobenzene (4-BFB)	²¹	1.85	mg/Kg	10	0.100	185	78 - 120

Sample: 6519 - Stockpile B

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 1352 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100

continued ...

²¹High surrogate recovery due to peak interference.

sample 6519 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		1.52	mg/Kg	10	0.00100
Xylene (isomers)	22	9.14	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.737	mg/Kg	10	0.100	74	58.9 - 129
4-Bromofluorobenzene (4-BFB)	23	4.38	mg/Kg	10	0.100	438	44.4 - 133

Sample: 6519 - Stockpile B

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		151	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		173	mg/Kg	1	150	115	83 - 174

Sample: 6519 - Stockpile B

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		260	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.746	mg/Kg	10	0.100	75	73 - 120
4-Bromofluorobenzene (4-BFB)	24	11.3	mg/Kg	10	0.100	1130	78 - 120

Sample: 6520 - Stockpile C

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 1352 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

²²Estimated concentration value is greater than the standard curve.

²³High surrogate recovery due to peak interference.

²⁴High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		1.06	mg/Kg	10	0.00100
Xylene (isomers)	25	6.15	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.692	mg/Kg	10	0.100	69	58.9 - 129
4-Bromofluorobenzene (4-BFB)	26	3.92	mg/Kg	10	0.100	392	44.4 - 133

Sample: 6520 - Stockpile C

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		124	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		170	mg/Kg	1	150	113	83 - 174

Sample: 6520 - Stockpile C

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		204	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	27	0.696	mg/Kg	10	0.100	70	73 - 120
4-Bromofluorobenzene (4-BFB)	28	8.58	mg/Kg	10	0.100	858	78 - 120

Sample: 6521 - Stockpile D

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 1352 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

²⁵ Estimated concentration value is greater than the standard curve.

²⁶ High surrogate recovery due to peak interference.

²⁷ Low surrogate recovery due to matrix interference.

²⁸ High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		1.16	mg/Kg	10	0.00100
Xylene (isomers)	29	5.71	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.706	mg/Kg	10	0.100	71	58.9 - 129
4-Bromofluorobenzene (4-BFB)	30	3.77	mg/Kg	10	0.100	377	44.4 - 133

Sample: 6521 - Stockpile D

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		75.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		181	mg/Kg	1	150	120	83 - 174

Sample: 6521 - Stockpile D

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		194	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	³¹	0.697	mg/Kg	10	0.100	70	73 - 120
4-Bromofluorobenzene (4-BFB)	³²	7.57	mg/Kg	10	0.100	757	78 - 120

Sample: 6522 - Stockpile E

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 1352 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

²⁹Estimated concentraion is greater than the standard curve.

³⁰High surrogate recovery due to peak interference.

³¹Low surrogate recovery due to matrix interference.

³²High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		0.871	mg/Kg	10	0.00100
Xylene (isomers)		3.65	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.736	mg/Kg	10	0.100	74	58.9 - 129
4-Bromofluorobenzene (4-BFB)	33	4.25	mg/Kg	10	0.100	425	44.4 - 133

Sample: 6522 - Stockpile E

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1387 Date Analyzed: 2003-05-03 Analyzed By: BP
Prep Batch: 1237 Date Prepared: 2003-05-01 Prepared By: WG

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-Triacontane		179	mg/Kg	1	150	119	83 - 174

Sample: 6522 - Stockpile E

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 1353 Date Analyzed: 2003-05-01 Analyzed By: DK
Prep Batch: 1211 Date Prepared: 2003-05-01 Prepared By: DK

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		221	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	34	0.717	mg/Kg	10	0.100	72	73 - 120
4-Bromofluorobenzene (4-BFB)	35	11.2	mg/Kg	10	0.100	1120	78 - 120

Method Blank (1) QC Batch: 1352

Parameter	Flag	Result	Units	MDL
Benzene		<0.00131	mg/Kg	0.000131
Toluene		<0.00365	mg/Kg	0.000365
Ethylbenzene		<0.00492	mg/Kg	0.000492
Xylene (isomers)		<0.00941	mg/Kg	0.000941

³³High surrogate recovery due to peak interference.

³⁴Low surrogate recovery due to matrix interference.

³⁵High surrogate recovery due to peak interference.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.841	mg/Kg	10	0.100	84	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.785	mg/Kg	10	0.100	78	44.4 - 133

Method Blank (1) QC Batch: 1353

Parameter	Flag	Result	Units	MDL
GRO		<0.381	mg/Kg	0.038146

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.812	mg/Kg	10	0.100	81	73 - 120
4-Bromofluorobenzene (4-BFB)		0.846	mg/Kg	10	0.100	85	78 - 120

Method Blank (1) QC Batch: 1387

Parameter	Flag	Result	Units	MDL
DRO		15.4	mg/Kg	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		184	mg/Kg	1	150	123	83 - 174

Laboratory Control Spike (LCS-1) QC Batch: 1352

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.971	0.978	mg/Kg	10	0.100	<0.00131	97	1	83.4 - 112	35
Toluene	0.969	0.974	mg/Kg	10	0.100	<0.00365	97	0	82.6 - 112	36
Ethylbenzene	0.964	0.972	mg/Kg	10	0.100	<0.00492	96	1	80.3 - 114	40
Xylene (isomers)	2.92	2.94	mg/Kg	10	0.300	<0.00941	97	1	78.9 - 114	39

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.857	0.854	mg/Kg	10	0.100	86	85	74.7 - 114
4-Bromofluorobenzene (4-BFB)	0.854	0.849	mg/Kg	10	0.100	85	85	76.2 - 110

Laboratory Control Spike (LCS-1) QC Batch: 1353

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	10.6	10.4	mg/Kg	10	1.00	<0.381	106	2	76.3 - 125	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.906	0.912	mg/Kg	10	0.100	91	91	73.7 - 114
4-Bromofluorobenzene (4-BFB)	0.919	0.920	mg/Kg	10	0.100	92	92	76.2 - 110

Laboratory Control Spike (LCS-1) QC Batch: 1387

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	260	256	mg/Kg	1	250	0	104	1	68.5 - 124	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-Triacontane	184	182	mg/Kg	1	150	122	121	83 - 174

Matrix Spike (MS-1) QC Batch: 1352

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	1.01	1.03	mg/Kg	10	0.100	<0.00131	101	2	58 - 107	22
Toluene	1.04	1.04	mg/Kg	10	0.100	<0.00365	104	0	59 - 110	20
Ethylbenzene	1.03	1.05	mg/Kg	10	0.100	<0.00492	103	2	58.4 - 113	15
Xylene (isomers)	3.13	3.18	mg/Kg	10	0.300	<0.00941	104	2	54.3 - 114	19

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.711	0.781	mg/Kg	10	0.1	71	78	50.6 - 114
4-Bromofluorobenzene (4-BFB)	0.703	0.741	mg/Kg	10	0.1	70	74	52 - 110

Matrix Spike (MS-1) QC Batch: 1353

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	8.38	8.16	mg/Kg	10	1.00	<0.381	84	3	32.9 - 152	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.656	0.568	mg/Kg	10	0.1	66	57	50.6 - 114
4-Bromofluorobenzene (4-BFB)	0.687	0.602	mg/Kg	10	0.1	69	60	52 - 110

Matrix Spike (MS-1) QC Batch: 1387

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	234	228	mg/Kg	1	250	0	94	2	37.5 - 147	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-Triacontane	170	181	mg/Kg	1	150	113	121	83 - 174

Standard (ICV-1) QC Batch: 1352

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0986	99	85 - 115	2003-05-01
Toluene		mg/L	0.100	0.0978	98	85 - 115	2003-05-01
Ethylbenzene		mg/L	0.100	0.0975	98	85 - 115	2003-05-01
Xylene (isomers)		mg/L	0.300	0.295	98	85 - 115	2003-05-01

Standard (CCV-1) QC Batch: 1352

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0959	96	85 - 115	2003-05-01
Toluene		mg/L	0.100	0.0964	96	85 - 115	2003-05-01
Ethylbenzene		mg/L	0.100	0.0958	96	85 - 115	2003-05-01
Xylene (isomers)		mg/L	0.300	0.290	97	85 - 115	2003-05-01

Standard (CCV-2) QC Batch: 1352

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0958	96	85 - 115	2003-05-01
Toluene		mg/L	0.100	0.0970	97	85 - 115	2003-05-01
Ethylbenzene		mg/L	0.100	0.0967	97	85 - 115	2003-05-01
Xylene (isomers)		mg/L	0.300	0.294	98	85 - 115	2003-05-01

Standard (ICV-1) QC Batch: 1353

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.06	106	85 - 115	2003-05-01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Trifluorotoluene (TFT)		0.093	mg/L	1	0.100	93	73 - 120
4-Bromofluorobenzene (4-BFB)		0.0918	mg/L	1	0.100	92	78 - 120

Standard (CCV-1) QC Batch: 1353

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.01	101	85 - 115	2003-05-01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Trifluorotoluene (TFT)		0.086	mg/L	1	0.100	86	73 - 120
4-Bromofluorobenzene (4-BFB)		0.0832	mg/L	1	0.100	83	78 - 120

Standard (CCV-2) QC Batch: 1353

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.04	104	85 - 115	2003-05-01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Trifluorotoluene (TFT)		0.0874	mg/L	1	0.100	87	73 - 120
4-Bromofluorobenzene (4-BFB)		0.0941	mg/L	1	0.100	94	78 - 120

Standard (ICV-1) QC Batch: 1387

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	250	100	83 - 174	2003-05-03

Standard (CCV-1) QC Batch: 1387

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	248	99	83 - 174	2003-05-03

Standard (CCV-2) QC Batch: 1387

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	254	102	83 - 174	2003-05-03

Standard (CCV-3) QC Batch: 1387

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	244	97	83 - 174	2003-05-03

Summary Report

Craig Eschberger
BNC Midland
2135 South Loop 250 West
Midland, TX 79703

Report Date: April 18, 2003

Work Order: 3040922

Project Location: Lovington, NM
Project Name: Denton Gathering
Project Number: 1014-01
Project #: 1014-01

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
4776	EEA Floor 5'	soil	2003-04-08	09:45	2003-04-09
4777	NWW 8'	soil	2003-04-08	09:55	2003-04-09
4778	WWC 2'	soil	2003-04-08	10:05	2003-04-09
4779	EW Center 3'	soil	2003-04-08	10:15	2003-04-09
4780	EWN 2'	soil	2003-04-08	10:20	2003-04-09

Sample - Field Code	BTEX				TPH DRO	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (isomers) (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
4776 - EEA Floor 5'	<0.0100	<0.0100	<0.0100	0.0119	462	<1.00
4777 - NWW 8'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
4778 - WWC 2'	<0.0100	<0.0100	0.0204	0.337	1530	28.6
4779 - EW Center 3'	<0.0500	<0.0500	0.165	1.69	4800	102
4780 - EWN 2'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

TRACE ANALYSIS, INC.

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Analytical and Quality Control Report

Craig Eschberger
BNC Midland
2135 South Loop 250 West
Midland, TX 79703

Report Date: April 18, 2003

Work Order: 3040922

Project Location: Lovington, NM
Project Name: Denton Gathering
Project Number: 1014-01
Project #: 1014-01

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
4776	EEA Floor 5'	soil	2003-04-08	09:45	2003-04-09
4777	NWW 8'	soil	2003-04-08	09:55	2003-04-09
4778	WWC 2'	soil	2003-04-08	10:05	2003-04-09
4779	EW Center 3'	soil	2003-04-08	10:15	2003-04-09
4780	EWN 2'	soil	2003-04-08	10:20	2003-04-09

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

Analytical Report

Sample: 4776 - EEA Floor 5'

Analysis: BTFX
QC Batch: 883
Prep Batch: 816

Analytical Method: S 8021B
Date Analyzed: 2003-04-09
Date Prepared: 2003-04-09

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		0.0119	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.94	mg/Kg	10	0.100	94	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.904	mg/Kg	10	0.100	90	44.4 - 133

Sample: 4776 - EEA Floor 5'

Analysis: TPH DRO
QC Batch: 967
Prep Batch: 892

Analytical Method: Mod. 8015B
Date Analyzed: 2003-04-15
Date Prepared: 2003-04-10

Prep Method: N/A
Analyzed By: BP
Prepared By: WG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		462	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		210	mg/Kg	1	150	140	83 - 174

Sample: 4776 - EEA Floor 5'

Analysis: TPH GRO
QC Batch: 884
Prep Batch: 816

Analytical Method: S 8015B
Date Analyzed: 2003-04-09
Date Prepared: 2003-04-09

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.94	mg/Kg	10	0.100	94	73 - 120
4-Bromofluorobenzene (4-BFB)		0.904	mg/Kg	10	0.100	90	78 - 120

Sample: 4777 - NWW 8'

Analysis: BTEX
QC Batch: 883
Prep Batch: 816

Analytical Method: S 8021B
Date Analyzed: 2003-04-09
Date Prepared: 2003-04-09

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

continued ...

sample 4777 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene (isomers)		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.882	mg/Kg	10	0.100	88	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.823	mg/Kg	10	0.100	82	44.4 - 133

Sample: 4777 - NWW 8'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 967 Date Analyzed: 2003-04-15 Analyzed By: BP
Prep Batch: 892 Date Prepared: 2003-04-10 Prepared By: WG

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-Triacontane		201	mg/Kg	1	150	134	83 - 174

Sample: 4777 - NWW 8'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 884 Date Analyzed: 2003-04-09 Analyzed By: CG
Prep Batch: 816 Date Prepared: 2003-04-09 Prepared By: CG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.882	mg/Kg	10	0.100	88	73 - 120
4-Bromofluorobenzene (4-BFB)		0.823	mg/Kg	10	0.100	82	78 - 120

Sample: 4778 - WWC 2'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 883 Date Analyzed: 2003-04-09 Analyzed By: CG
Prep Batch: 816 Date Prepared: 2003-04-09 Prepared By: CG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		0.0204	mg/Kg	10	0.00100

continued ...

sample 4778 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Xylene (isomers)		0.337	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.87	mg/Kg	10	0.100	87	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.977	mg/Kg	10	0.100	98	44.4 - 133

Sample: 4778 - WWC 2'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 967 Date Analyzed: 2003-04-15 Analyzed By: BP
Prep Batch: 892 Date Prepared: 2003-04-10 Prepared By: WG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		1530	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		254	mg/Kg	1	150	170	83 - 174

Sample: 4778 - WWC 2'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 884 Date Analyzed: 2003-04-09 Analyzed By: CG
Prep Batch: 816 Date Prepared: 2003-04-09 Prepared By: CG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		28.6	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.948	mg/Kg	10	0.100	95	73 - 120
4-Bromofluorobenzene (4-BFB)	¹	1.43	mg/Kg	10	0.100	143	78 - 120

Sample: 4779 - EW Center 3'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 883 Date Analyzed: 2003-04-09 Analyzed By: CG
Prep Batch: 816 Date Prepared: 2003-04-09 Prepared By: CG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	²	<0.0500	mg/Kg	50	0.00100
Toluene		<0.0500	mg/Kg	50	0.00100
Ethylbenzene		0.165	mg/Kg	50	0.00100
Xylene (isomers)		1.69	mg/Kg	50	0.00100

¹High surrogate recovery due to peak interference.

²Sample diluted due to hydrocarbons beyond xylene. Sample has a Benzene concentration of less than 0.00655 which is the MDL.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.911	mg/Kg	50	0.0200	91	58.9 - 129
4-Bromofluorobenzene (4-BFB)	3	1.66	mg/Kg	50	0.0200	166	44.4 - 133

Sample: 4779 - EW Center 3'

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 1034 Date Analyzed: 2003-04-17 Analyzed By: BP
Prep Batch: 950 Date Prepared: 2003-04-15 Prepared By: WG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		4800	mg/Kg	10	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	4	525	mg/Kg	10	15.0	350	83 - 174

Sample: 4779 - EW Center 3'

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 884 Date Analyzed: 2003-04-09 Analyzed By: CG
Prep Batch: 816 Date Prepared: 2003-04-09 Prepared By: CG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		102	mg/Kg	50	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	5	1.22	mg/Kg	50	0.0200	122	73 - 120
4-Bromofluorobenzene (4-BFB)	6	2.46	mg/Kg	50	0.0200	246	78 - 120

Sample: 4780 - EWN 2'

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 883 Date Analyzed: 2003-04-09 Analyzed By: CG
Prep Batch: 816 Date Prepared: 2003-04-09 Prepared By: CG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	7	<0.0200	mg/Kg	20	0.00100
Toluene		<0.0200	mg/Kg	20	0.00100
Ethylbenzene		<0.0200	mg/Kg	20	0.00100
Xylene (isomers)		<0.0200	mg/Kg	20	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.901	mg/Kg	20	0.0500	90	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.962	mg/Kg	20	0.0500	96	44.4 - 133

³High surrogate recovery due to peak interference.

⁴Surrogate recovery out of range due to peak interference. QC are within control.

⁵High surrogate recovery due to peak interference.

⁶High surrogate recovery due to peak interference.

⁷Sample diluted due to turbidity. Sample has a Benzene concentration of less than 0.00262 which is the MDL.

Report Date: April 18, 2003
1014-01

Work Order: 3040922
Denton Gathering

Page Number: 6 of 10
Lovington, NM

Sample: 4780 - EWN 2'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	967	Date Analyzed:	2003-04-15	Analyzed By:	BP
Prep Batch:	892	Date Prepared:	2003-04-10	Prepared By:	WG

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-Triacontane		183	mg/Kg	1	150	122	83 - 174

Sample: 4780 - EWN 2'

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	884	Date Analyzed:	2003-04-09	Analyzed By:	CG
Prep Batch:	816	Date Prepared:	2003-04-09	Prepared By:	CG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	^s	<2.00	mg/Kg	20	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.901	mg/Kg	20	0.0500	90	73 - 120
4-Bromofluorobenzene (4-BFB)		0.962	mg/Kg	20	0.0500	96	78 - 120

Method Blank (1) QC Batch: 1034

Parameter	Flag	Result	Units	MDL
DRO		16.1	mg/Kg	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		181	mg/Kg	1	150	121	83 - 174

Method Blank (1) QC Batch: 883

Parameter	Flag	Result	Units	MDL
Benzene		<0.00131	mg/Kg	0.000131
Toluene		<0.00365	mg/Kg	0.000365
Ethylbenzene		<0.00492	mg/Kg	0.000492
Xylene (isomers)		<0.00941	mg/Kg	0.000941

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.96	mg/Kg	10	0.100	96	58.9 - 129
4-Bromofluorobenzene (4-BFB)		0.903	mg/Kg	10	0.100	90	44.4 - 133

Method Blank (1) QC Batch: 884

^sSample diluted due to turbidity. Sample has a Benzene concentration of less than 0.763 which is the MDL.

Parameter	Flag	Result	Units	MDL
GRO		<0.381	mg/Kg	0.038146

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.96	mg/Kg	10	0.100	96	73 - 120
4-Bromofluorobenzene (4-BFB)		0.903	mg/Kg	10	0.100	90	78 - 120

Method Blank (1) QC Batch: 967

Parameter	Flag	Result	Units	MDL
DRO		39.6	mg/Kg	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		200	mg/Kg	1	150	133	83 - 174

Laboratory Control Spike (LCS-1) QC Batch: 1034

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	244	245	mg/Kg	1	250	0	98	0	68.5 - 124	20
DRO	244	245	mg/Kg	1	250	0	98	0	68.5 - 124	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-Triacontane	181	182	mg/Kg	1	150	120	121	83 - 174
n-Triacontane	181	182	mg/Kg	1	150	120	121	83 - 174

Laboratory Control Spike (LCS-1) QC Batch: 883

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.934	0.931	mg/Kg	10	0.100	<0.00131	93	0	83.4 - 112	35
Toluene	0.929	0.933	mg/Kg	10	0.100	<0.00365	93	0	82.6 - 112	36
Ethylbenzene	0.934	0.935	mg/Kg	10	0.100	<0.00492	93	0	80.3 - 114	40
Xylene (isomers)	2.84	2.84	mg/Kg	10	0.300	<0.00941	94	0	78.9 - 114	39

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.985	1.01	mg/Kg	10	0.100	98	101	74.7 - 114
4-Bromofluorobenzene (4-BFB)	0.958	0.931	mg/Kg	10	0.100	96	93	76.2 - 110

Laboratory Control Spike (LCS-1) QC Batch: 884

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	9.79	10.8	mg/Kg	10	1.00	<0.381	98	5	76.3 - 125	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.985	1.01	mg/Kg	10	0.100	98	101	73.7 - 114
4-Bromofluorobenzene (4-BFB)	0.958	0.931	mg/Kg	10	0.100	96	93	76.2 - 110

Laboratory Control Spike (LCS-1) QC Batch: 967

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	268	282	mg/Kg	1	250	0	107	2	68.5 - 124	20
DRO	268	282	mg/Kg	1	250	0	107	2	68.5 - 124	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-Triacontane	193	198	mg/Kg	1	150	129	132	83 - 174
n-Triacontane	193	198	mg/Kg	1	150	129	132	83 - 174

Matrix Spike (MS-1) QC Batch: 883

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.909	0.925	mg/Kg	10	0.100	<0.00131	91	1	58 - 107	22
Toluene	0.917	0.936	mg/Kg	10	0.100	<0.00365	92	1	59 - 110	20
Ethylbenzene	0.912	0.943	mg/Kg	10	0.100	<0.00492	91	2	58.4 - 113	15
Xylene (isomers)	2.76	2.87	mg/Kg	10	0.300	<0.00941	92	2	54.3 - 114	19

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.908	0.905	mg/Kg	10	0.1	91	90	50.6 - 114
4-Bromofluorobenzene (4-BFB)	0.866	0.893	mg/Kg	10	0.1	87	89	52 - 110

Matrix Spike (MS-1) QC Batch: 884

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	7.91	8.70	mg/Kg	10	1.00	<0.381	79	5	32.9 - 152	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.908	0.905	mg/Kg	10	0.1	91	90	50.6 - 114
4-Bromofluorobenzene (4-BFB)	0.866	0.893	mg/Kg	10	0.1	87	89	52 - 110

Matrix Spike (MS-1) QC Batch: 967

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	246	251	mg/Kg	1	250	0	98	1	37.5 - 147	20

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

continued ...

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
n-Triacontane	172	180	mg/Kg	1	150	115	120	83 - 174

Standard (ICV-1) QC Batch: 1034

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	239	96	83 - 174	2003-04-17

Standard (CCV-1) QC Batch: 1034

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	24.2	97	83 - 174	2003-04-17

Standard (CCV-1) QC Batch: 883

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0919	92	85 - 115	2003-04-09
Toluene		mg/L	0.100	0.0933	93	85 - 115	2003-04-09
Ethylbenzene		mg/L	0.100	0.0939	94	85 - 115	2003-04-09
Xylene (isomers)		mg/L	0.300	0.285	95	85 - 115	2003-04-09

Standard (CCV-2) QC Batch: 883

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0923	92	85 - 115	2003-04-09
Toluene		mg/L	0.100	0.0924	92	85 - 115	2003-04-09
Ethylbenzene		mg/L	0.100	0.0925	92	85 - 115	2003-04-09
Xylene (isomers)		mg/L	0.300	0.280	93	85 - 115	2003-04-09

Standard (CCV-1) QC Batch: 884

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.997	100	85 - 115	2003-04-09

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Trifluorotoluene (TFT)		0.0969	mg/L	1	0.100	97	73 - 120
4-Bromofluorobenzene (4-BFB)		0.0942	mg/L	1	0.100	94	78 - 120

Standard (CCV-2) QC Batch: 884

Report Date: April 18, 2003
1014-01

Work Order: 3040922
Denton Gathering

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Lovington, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.975	98	85 - 115	2003-04-09

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Trifluorotoluene (TFT)		0.0969	mg/L	1	0.100	97	73 - 120
4-Bromofluorobenzene (4-BFB)		0.0966	mg/L	1	0.100	97	78 - 120

Standard (CCV-1) QC Batch: 967

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	268	107	83 - 174	2003-04-15

Standard (CCV-2) QC Batch: 967

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	274	110	83 - 174	2003-04-15

Standard (CCV-3) QC Batch: 967

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	290	116	83 - 174	2003-04-15

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Lubbock, Texas 79424
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TraceAnalysis, Inc.

155 McCutcheon Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

Company Name:

BVC SERVICES

Phone #:

915/6860856

Address:

(Street, City, Zip)

1101 AND

Fax #:

915/6860156

Contact Person:

CEAHB EXHIBIT

Invoice to:

If different from above

Project #:

1014-01

Project Name:

Denton Eastman

Project Location:

Louington NM

Sampler Signature:

James Connolly

LAB #	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD					SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	DATE	TIME
4776	EEA Floor 5'	1	4oz	X							X		4/8	9:45
77	NW 8'	1		X							X		11	9:55
78	WWC 2'	1		X							X		11	10:05
79	EW center 3'	1		X							X		11	10:15
80	EW N 2'	1		X							X		11	10:20

ANALYSIS REQUEST

(Circle or Specify Method No.)

PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCBs 8082/608	
Pesticides 8081A/608	
RON, TSS, PH	
Turn Around Time if different from standard	

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

Q304092A

LAB USE ONLY

Intact

Y / N

Headspace

Y / N

Temp

°

Log-in Review

MA

REMARKS:

4/10/03

☐ Check If Special Reporting Limits Are Needed

Carrier #

5 samples

16130292-9

4/10/03

16130292-9

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