

Bratcher, Mike, EMNRD

From: Victor Ayala [vayala@dh-enviro.com]
Sent: Wednesday, July 21, 2010 2:04 PM
To: Bratcher, Mike, EMNRD
Cc: Lourdes Fric
Subject: FW: Murchison Oil & Gas (10071425)
Attachments: TRRP_Report.pdf; Field Sketch with FID Readings.pdf

Mike,

Attached is the lab report for the samples collected at the Murchison Oil Lease in Artesia. The data shows that four of the samples had only trace amounts of TPH and BTEX compounds. Sample 1 had a total TPH of 13,740 mg/Kg and Sample 4 had a TPH of 11,240 mg/Kg. Our draftsman is preparing a drawing on the sampling location but attached is the field sketch showing sample locations. Let me know if you need anything further at this time.

Regards,

Victor Ayala
Environmental Manager
D&H Petroleum & Environmental Services

-----Original Message-----

From: reports@traceanalysis.com [mailto:reports@traceanalysis.com]
Sent: Monday, July 19, 2010 2:44 PM
To: Victor Ayala
Subject: Murchison Oil & Gas (10071425)

NOTE: To ensure you receive email, please add reports@traceanalysis.com to your address book.

TraceAnalysis, Inc.

(attachments enclosed)

Work Order: 10071425
Contact Person: Victor Ayala

Project Location: Artesia Carbon Valley 25
Project Name: Murchison Oil & Gas Inc.

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Certifications

WBENC: 237019 HUB: 1752439743100-86536 DBE: VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX El Paso: T104704221-08-TX Midland: T104704392-08-TX
LELAP-02003 LELAP-02002
Kansas E-10317

Analytical and Quality Control Report

Victor Ayala
D & H Petroleum and Environmental
1221 Tower Trail
P.O. Box 17969
El Paso, TX, 79907

Report Date: July 19, 2010

Work Order: 10071425



Project Location: Artesia Carbon Valley 25
Project Name: Murchison Oil & Gas Inc.

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
237484	S1 Surface	soil	2010-07-08	09:50	2010-07-14
237485	S2 Surface	soil	2010-07-08	09:53	2010-07-14
237486	S3 Surface	soil	2010-07-08	09:55	2010-07-14
237487	S4 Surface	soil	2010-07-08	10:01	2010-07-14
237488	S5 Surface	soil	2010-07-08	10:04	2010-07-14
237489	S6 Surface	soil	2010-07-08	10:07	2010-07-14
237490	S1 6 in.	soil	2010-07-08	10:10	2010-07-14
237491	S2 6 in.	soil	2010-07-08	10:15	2010-07-14
237492	S3 6 in.	soil	2010-07-08	10:20	2010-07-14
237493	S4 6 in.	soil	2010-07-08	10:30	2010-07-14

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
237494	S5 6 in.	soil	2010-07-08	10:40	2010-07-14
237495	S6 6 in.	soil	2010-07-08	10:45	2010-07-14

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

This report consists of a total of 20 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Notes:

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

Standard Flags

- U** - Not detected. The analyte is not detected above the SDL.
- J** - Estimated. The analyte is positively identified and the value is approximated between the SDL and MQL.
- B** - The sample contains less than ten times the concentration found in the method blank
- JB** - The analyte is positively identified and the value is approximated between the SDL and MQL.
The sample contains less than ten times the concentration found in the method blank.
The result should be considered non-detect to the SDL



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

Case Narrative

Samples for project Murchison Oil & Gas Inc. were received by TraceAnalysis, Inc. on 2010-07-14 and assigned to work order 10071425. Samples for work order 10071425 were received intact at a temperature of 3.6 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	61444	2010-07-14 at 16:27	71716	2010-07-14 at 16:27
BTEX	S 8021B	61549	2010-07-16 at 15:42	71830	2010-07-16 at 15:42
MTBE	S 8021B	61444	2010-07-14 at 16:27	71716	2010-07-14 at 16:27
MTBE	S 8021B	61549	2010-07-16 at 15:42	71830	2010-07-16 at 15:42
TPH DRO - NEW	S 8015 D	61466	2010-07-14 at 15:00	71737	2010-07-14 at 19:00
TPH DRO - NEW	S 8015 D	61511	2010-07-15 at 15:00	71784	2010-07-15 at 18:00
TPH GRO	S 8015 D	61444	2010-07-14 at 16:27	71717	2010-07-14 at 16:27

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10071425 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 237490 - S1 6 in.

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 71716

Prep Batch: 61444

Analytical Method: S 8021B

Date Analyzed: 2010-07-14

Sample Preparation: 2010-07-14

Prep Method: S 5035

Analyzed By: ER

Prepared By: ER

Parameter	Flag	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
MTBE	^U	<0.189	<0.400	<0.189	mg/Kg	20	0.189	0.02	0.00947
Benzene	^{1 U}	<0.0924	<0.400	<0.0924	mg/Kg	20	0.0924	0.02	0.00462
Toluene		7.04	7.04	<0.116	mg/Kg	20	0.116	0.02	0.00582
Ethylbenzene		8.33	8.33	<0.0866	mg/Kg	20	0.0866	0.02	0.00433
Xylene		60.5	60.5	<0.0766	mg/Kg	20	0.0766	0.02	0.00383

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.61	mg/Kg	20	2.00	80	76.3 - 110
4-Bromofluorobenzene (4-BFB)		1.97	mg/Kg	20	2.00	98	73.8 - 112

Sample: 237490 - S1 6 in.

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 71784

Prep Batch: 61511

Analytical Method: S 8015 D

Date Analyzed: 2010-07-15

Sample Preparation: 2010-07-15

Prep Method: N/A

Analyzed By: AW

Prepared By: AW

Parameter	Flag	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
DRO		11100	11100	<74.6	mg/Kg	10	74.6	50	7.46

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	²	375	mg/Kg	10	100	375	55.5 - 151

Sample: 237490 - S1 6 in.

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 71717

Prep Batch: 61444

Analytical Method: S 8015 D

Date Analyzed: 2010-07-14

Sample Preparation: 2010-07-14

Prep Method: S 5035

Analyzed By: ER

Prepared By: ER

¹Sample ran at dilution due to hydrocarbons with a retention time greater than xylene.²High surrogate recovery due to peak interference.

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO		2640	2640	<4.82	mg/Kg	20	4.82	2	0.241

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.96	mg/Kg	20	2.00	98	84.8 - 114
4-Bromofluorobenzene (4-BFB)	³	21.8	mg/Kg	20	2.00	1090	70.8 - 113

Sample: 237491 - S2 6 in.

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 71716

Prep Batch: 61444

Analytical Method: S 8021B

Date Analyzed: 2010-07-14

Sample Preparation: 2010-07-14

Prep Method: S 5035

Analyzed By: ER

Prepared By: ER

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
MTBE	<i>U</i>	<0.00947	<0.0200	<0.00947	mg/Kg	1	0.00947	0.02	0.00947
Benzene	<i>U</i>	<0.00462	<0.0200	<0.00462	mg/Kg	1	0.00462	0.02	0.00462
Toluene	<i>U</i>	<0.00582	<0.0200	<0.00582	mg/Kg	1	0.00582	0.02	0.00582
Ethylbenzene	<i>U</i>	<0.00433	<0.0200	<0.00433	mg/Kg	1	0.00433	0.02	0.00433
Xylene	<i>J</i>	0.00700	<0.0200	<0.00383	mg/Kg	1	0.00383	0.02	0.00383

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.52	mg/Kg	1	2.00	76	76.3 - 110
4-Bromofluorobenzene (4-BFB)		1.69	mg/Kg	1	2.00	84	73.8 - 112

Sample: 237491 - S2 6 in.

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 71737

Prep Batch: 61466

Analytical Method: S 8015 D

Date Analyzed: 2010-07-14

Sample Preparation: 2010-07-14

Prep Method: N/A

Analyzed By: AW

Prepared By: AW

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	<i>J</i>	32.6	<50.0	<7.46	mg/Kg	1	7.46	50	7.46

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		125	mg/Kg	1	100	125	55.5 - 151

³High surrogate recovery due to peak interference.

Sample: 237491 - S2 6 in.Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 71717
Prep Batch: 61444Analytical Method: S 8015 D
Date Analyzed: 2010-07-14
Sample Preparation: 2010-07-14Prep Method: S 5035
Analyzed By: ER
Prepared By: ER

Parameter	Flag	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
GRO	U	<0.241	<2.00	<0.241	mg/Kg	1	0.241	2	0.241

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.82	mg/Kg	1	2.00	91	84.8 - 114
4-Bromofluorobenzene (4-BFB)		1.98	mg/Kg	1	2.00	99	70.8 - 113

Sample: 237492 - S3 6 in.Laboratory: Lubbock
Analysis: BTEX
QC Batch: 71830
Prep Batch: 61549Analytical Method: S 8021B
Date Analyzed: 2010-07-16
Sample Preparation: 2010-07-16Prep Method: S 5035
Analyzed By: ER
Prepared By: ER

Parameter	Flag	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
MTBE	U	<0.00981	<0.0200	<0.00981	mg/Kg	1	0.00981	0.02	0.00981
Benzene	U	<0.00629	<0.0200	<0.00629	mg/Kg	1	0.00629	0.02	0.00629
Toluene	U	<0.0108	<0.0200	<0.0108	mg/Kg	1	0.0108	0.02	0.0108
Ethylbenzene	U	<0.0117	<0.0200	<0.0117	mg/Kg	1	0.0117	0.02	0.0117
Xylene	U	<0.0145	<0.0200	<0.0145	mg/Kg	1	0.0145	0.02	0.0145

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.90	mg/Kg	1	2.00	95	75.5 - 105
4-Bromofluorobenzene (4-BFB)		1.81	mg/Kg	1	2.00	90	76.7 - 106

Sample: 237492 - S3 6 in.Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 71737
Prep Batch: 61466Analytical Method: S 8015 D
Date Analyzed: 2010-07-14
Sample Preparation: 2010-07-14Prep Method: N/A
Analyzed By: AW
Prepared By: AW*continued ...*

sample 237492 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	J	13.4	<50.0	<7.46	mg/Kg	1	7.46	50	7.46

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		121	mg/Kg	1	100	121	55.5 - 151

Sample: 237492 - S3 6 in.

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 71717

Prep Batch: 61444

Analytical Method: S 8015 D

Date Analyzed: 2010-07-14

Sample Preparation: 2010-07-14

Prep Method: S 5035

Analyzed By: ER

Prepared By: ER

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	<0.241	<2.00	<0.241	mg/Kg	1	0.241	2	0.241

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.73	mg/Kg	1	2.00	86	84.8 - 114
4-Bromofluorobenzene (4-BFB)		1.82	mg/Kg	1	2.00	91	70.8 - 113

Sample: 237493 - S4 6 in.

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 71716

Prep Batch: 61444

Analytical Method: S 8021B

Date Analyzed: 2010-07-14

Sample Preparation: 2010-07-14

Prep Method: S 5035

Analyzed By: ER

Prepared By: ER

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
MTBE	U	<0.189	<0.400	<0.189	mg/Kg	20	0.189	0.02	0.00947
Benzene	4 U	<0.0924	<0.400	<0.0924	mg/Kg	20	0.0924	0.02	0.00462
Toluene		1.86	1.86	<0.116	mg/Kg	20	0.116	0.02	0.00582
Ethylbenzene		3.86	3.86	<0.0866	mg/Kg	20	0.0866	0.02	0.00433

*continued ...*⁴Sample ran at dilution due to hydrocarbons with a retention time greater than xylene

sample 237493 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Xylene		26.3	26.3	<0.0766	mg/Kg	20	0.0766	0.02	0.00383
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits		
Trifluorotoluene (TFT)		2.09	mg/Kg	20	2.00	104	76.3 - 110		
4-Bromofluorobenzene (4-BFB)		1.62	mg/Kg	20	2.00	81	73.8 - 112		

Sample: 237493 - S4 6 in.

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 71784

Prep Batch: 61511

Analytical Method: S 8015 D

Date Analyzed: 2010-07-15

Sample Preparation: 2010-07-15

Prep Method: N/A

Analyzed By: AW

Prepared By: AW

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO		9430	9430	<7.46	mg/Kg	1	7.46	50	7.46
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits		
n-Tricosane	⁵	423	mg/Kg	10	100	423	55.5 - 151		

Sample: 237493 - S4 6 in.

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 71717

Prep Batch: 61444

Analytical Method: S 8015 D

Date Analyzed: 2010-07-14

Sample Preparation: 2010-07-14

Prep Method: S 5035

Analyzed By: ER

Prepared By: ER

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	⁶	1810	1810	<4.82	mg/Kg	20	4.82	2	0.241
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits		
Trifluorotoluene (TFT)	⁷	1.46	mg/Kg	20	2.00	73	84.8 - 114		
4-Bromofluorobenzene (4-BFB)	⁸	9.90	mg/Kg	20	2.00	495	70.8 - 113		

⁵High surrogate recovery due to peak interference.⁶Sample ran at dilution due to hydrocarbons with a retention time greater than xylene.⁷Surrogate recovery out due to dilution caused by hydrocarbons in the sample.⁸High surrogate recovery due to peak interference

Sample: 237494 - S5 6 in.

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 71716

Prep Batch: 61444

Analytical Method: S 8021B

Date Analyzed: 2010-07-14

Sample Preparation: 2010-07-14

Prep Method: S 5035

Analyzed By: ER

Prepared By: ER

Parameter	Flag	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
MTBE	U	<0.00947	<0.0200	<0.00947	mg/Kg	1	0.00947	0.02	0.00947
Benzene	U	<0.00462	<0.0200	<0.00462	mg/Kg	1	0.00462	0.02	0.00462
Toluene	U	<0.00582	<0.0200	<0.00582	mg/Kg	1	0.00582	0.02	0.00582
Ethylbenzene	U	<0.00433	<0.0200	<0.00433	mg/Kg	1	0.00433	0.02	0.00433
Xylene	J	0.00650	<0.0200	<0.00383	mg/Kg	1	0.00383	0.02	0.00383

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.71	mg/Kg	1	2.00	86	76.3 - 110
4-Bromofluorobenzene (4-BFB)		1.88	mg/Kg	1	2.00	94	73.8 - 112

Sample: 237494 - S5 6 in.

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 71737

Prep Batch: 61466

Analytical Method: S 8015 D

Date Analyzed: 2010-07-14

Sample Preparation: 2010-07-14

Prep Method: N/A

Analyzed By: AW

Prepared By: AW

Parameter	Flag	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
DRO	J	11.0	<50.0	<7.46	mg/Kg	1	7.46	50	7.46

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		124	mg/Kg	1	100	124	55.5 - 151

Sample: 237494 - S5 6 in.

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 71717

Prep Batch: 61444

Analytical Method: S 8015 D

Date Analyzed: 2010-07-14

Sample Preparation: 2010-07-14

Prep Method: S 5035

Analyzed By: ER

Prepared By: ER

Parameter	Flag	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
GRO	U	<0.241	<2.00	<0.241	mg/Kg	1	0.241	2	0.241

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.03	mg/Kg	1	2.00	102	84.8 - 114
4-Bromofluorobenzene (4-BFB)		2.19	mg/Kg	1	2.00	110	70.8 - 113

Sample: 237495 - S6 6 in.

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 71716

Prep Batch: 61444

Analytical Method: S 8021B

Date Analyzed: 2010-07-14

Sample Preparation: 2010-07-14

Prep Method: S 5035

Analyzed By: ER

Prepared By: ER

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
MTBE	U	<0.00947	<0.0200	<0.00947	mg/Kg	1	0.00947	0.02	0.00947
Benzene	U	<0.00462	<0.0200	<0.00462	mg/Kg	1	0.00462	0.02	0.00462
Toluene	J	0.0107	<0.0200	<0.00582	mg/Kg	1	0.00582	0.02	0.00582
Ethylbenzene	U	<0.00433	<0.0200	<0.00433	mg/Kg	1	0.00433	0.02	0.00433
Xylene	J	0.00570	<0.0200	<0.00383	mg/Kg	1	0.00383	0.02	0.00383

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.54	mg/Kg	1	2.00	77	76.3 - 110
4-Bromofluorobenzene (4-BFB)		1.62	mg/Kg	1	2.00	81	73.8 - 112

Sample: 237495 - S6 6 in.

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 71737

Prep Batch: 61466

Analytical Method: S 8015 D

Date Analyzed: 2010-07-14

Sample Preparation: 2010-07-14

Prep Method: N/A

Analyzed By: AW

Prepared By: AW

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	J	45.7	<50.0	<7.46	mg/Kg	1	7.46	50	7.46

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		129	mg/Kg	1	100	129	55.5 - 151

Sample: 237495 - S6 6 in.

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 71717

Analytical Method: S 8015 D

Date Analyzed: 2010-07-14

Prep Method: S 5035

Analyzed By: ER

Prep Batch: 61444

Sample Preparation: 2010-07-14

Prepared By: ER

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	<0.241	<2.00	<0.241	mg/Kg	1	0.241	2	0.241

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.83	mg/Kg	1	2.00	92	84.8 - 114
4-Bromofluorobenzene (4-BFB)		1.88	mg/Kg	1	2.00	94	70.8 - 113

Method Blank (1)QC Batch: 71716
Prep Batch: 61444Date Analyzed: 2010-07-14
QC Preparation: 2010-07-14Analyzed By: ER
Prepared By: ER

Parameter	Flag	Result	Units	Reporting Limits
MTBE		<0.00947	mg/Kg	0.00947
Benzene		<0.00462	mg/Kg	0.00462
Toluene		<0.00582	mg/Kg	0.00582
Ethylbenzene		<0.00433	mg/Kg	0.00433
Xylene		<0.00383	mg/Kg	0.00383

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.57	mg/Kg	1	2.00	78	76.3 - 110
4-Bromofluorobenzene (4-BFB)		1.60	mg/Kg	1	2.00	80	73.8 - 112

Method Blank (1)QC Batch: 71717
Prep Batch: 61444Date Analyzed: 2010-07-14
QC Preparation: 2010-07-14Analyzed By: ER
Prepared By: ER

Parameter	Flag	Result	Units	Reporting Limits
GRO		<0.241	mg/Kg	0.241

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.94	mg/Kg	1	2.00	97	84.8 - 114
4-Bromofluorobenzene (4-BFB)		1.90	mg/Kg	1	2.00	95	70.8 - 113

Method Blank (1)QC Batch: 71737
Prep Batch: 61466Date Analyzed: 2010-07-14
QC Preparation: 2010-07-14Analyzed By: AW
Prepared By: AW

Parameter	Flag	Result	Units	Reporting Limits
DRO		<7.46	mg/Kg	7.46

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		112	mg/Kg	1	100	112	55.5 - 151

Method Blank (1)QC Batch: 71784
Prep Batch: 61511Date Analyzed: 2010-07-15
QC Preparation: 2010-07-15Analyzed By: AW
Prepared By: AW

Parameter	Flag	Result	Units	Reporting Limits
DRO		<7.46	mg/Kg	7.46

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		110	mg/Kg	1	100	110	55.5 - 151

Method Blank (1)QC Batch: 71830
Prep Batch: 61549Date Analyzed: 2010-07-16
QC Preparation: 2010-07-16Analyzed By: ER
Prepared By: ER

Parameter	Flag	Result	Units	Reporting Limits
MTBE		<0.00981	mg/Kg	0.00981
Benzene		<0.00629	mg/Kg	0.00629
Toluene		<0.0108	mg/Kg	0.0108
Ethylbenzene		<0.0117	mg/Kg	0.0117
Xylene		<0.0145	mg/Kg	0.0145

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.83	mg/Kg	1	2.00	92	75.5 - 105
4-Bromofluorobenzene (4-BFB)		1.90	mg/Kg	1	2.00	95	76.7 - 106

Laboratory Control Spike (LCS-1)QC Batch: 71716
Prep Batch: 61444Date Analyzed: 2010-07-14
QC Preparation: 2010-07-14Analyzed By: ER
Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE	1.66	mg/Kg	1	2.00	<0.00947	83	74.6 - 119
Benzene	1.70	mg/Kg	1	2.00	<0.00462	85	80.6 - 112
Toluene	1.77	mg/Kg	1	2.00	<0.00582	88	80.7 - 113
Ethylbenzene	1.68	mg/Kg	1	2.00	<0.00433	84	79.2 - 110
Xylene	5.10	mg/Kg	1	6.00	<0.00383	85	79.8 - 113

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
MTBE	1.59	mg/Kg	1	2.00	<0.00947	80	74.6 - 119	4	20
Benzene	1.68	mg/Kg	1	2.00	<0.00462	84	80.6 - 112	1	20
Toluene	1.73	mg/Kg	1	2.00	<0.00582	86	80.7 - 113	2	20
Ethylbenzene	1.64	mg/Kg	1	2.00	<0.00433	82	79.2 - 110	2	20
Xylene	5.00	mg/Kg	1	6.00	<0.00383	83	79.8 - 113	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.65	1.59	mg/Kg	1	2.00	82	80	79.5 - 109
4-Bromofluorobenzene (4-BFB)	1.63	1.58	mg/Kg	1	2.00	82	79	77.7 - 113

Laboratory Control Spike (LCS-1)QC Batch: 71717
Prep Batch: 61444Date Analyzed: 2010-07-14
QC Preparation: 2010-07-14Analyzed By: ER
Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	20.2	mg/Kg	1	20.0	<0.241	101	78.5 - 118

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	20.2	mg/Kg	1	20.0	<0.241	101	78.5 - 118	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.80	1.81	mg/Kg	1	2.00	90	90	81.9 - 111
4-Bromofluorobenzene (4-BFB)	1.93	1.91	mg/Kg	1	2.00	96	96	78.2 - 117

Laboratory Control Spike (LCS-1)QC Batch: 71737
Prep Batch: 61466Date Analyzed: 2010-07-14
QC Preparation: 2010-07-14Analyzed By: AW
Prepared By: AW

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	265	mg/Kg	1	250	<7.46	106	76 - 157

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	267	mg/Kg	1	250	<7.46	107	76 - 157	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	126	128	mg/Kg	1	100	126	128	55.5 - 151

Laboratory Control Spike (LCS-1)QC Batch: 71784
Prep Batch: 61511Date Analyzed: 2010-07-15
QC Preparation: 2010-07-15Analyzed By: AW
Prepared By: AW

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	249	mg/Kg	1	250	<7.46	100	76 - 157

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	264	mg/Kg	1	250	<7.46	106	76 - 157	6	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	115	125	mg/Kg	1	100	115	125	55.5 - 151

Laboratory Control Spike (LCS-1)QC Batch: 71830
Prep Batch: 61549Date Analyzed: 2010-07-16
QC Preparation: 2010-07-16Analyzed By: ER
Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE	1.82	mg/Kg	1	2.00	<0.00981	91	78.4 - 103
Benzene	1.91	mg/Kg	1	2.00	<0.00629	96	84.9 - 109

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Toluene	1.88	mg/Kg	1	2.00	<0.0108	94	83.8 - 109
Ethylbenzene	1.91	mg/Kg	1	2.00	<0.0117	96	83.8 - 109
Xylene	5.78	mg/Kg	1	6.00	<0.0145	96	84.6 - 113

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
MTBE	1.81	mg/Kg	1	2.00	<0.00981	90	78.4 - 103	1	20
Benzene	1.94	mg/Kg	1	2.00	<0.00629	97	84.9 - 109	2	20
Toluene	1.92	mg/Kg	1	2.00	<0.0108	96	83.8 - 109	2	20
Ethylbenzene	1.95	mg/Kg	1	2.00	<0.0117	98	83.8 - 109	2	20
Xylene	5.91	mg/Kg	1	6.00	<0.0145	98	84.6 - 113	2	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.03	1.99	mg/Kg	1	2.00	102	100	77.1 - 114
4-Bromofluorobenzene (4-BFB)	1.88	1.92	mg/Kg	1	2.00	94	96	75.6 - 112

Matrix Spike (MS-1) Spiked Sample: 237491QC Batch: 71716
Prep Batch: 61444Date Analyzed: 2010-07-14
QC Preparation: 2010-07-14Analyzed By: ER
Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE	1.77	mg/Kg	1	2.00	<0.00947	88	51.2 - 121
Benzene	1.46	mg/Kg	1	2.00	<0.00462	73	61.7 - 127
Toluene	1.64	mg/Kg	1	2.00	<0.00582	82	60.8 - 136
Ethylbenzene	1.62	mg/Kg	1	2.00	<0.00433	81	70.3 - 132
Xylene	4.95	mg/Kg	1	6.00	0.007	82	69.7 - 139

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
MTBE	1.75	mg/Kg	1	2.00	<0.00947	88	51.2 - 121	1	20
Benzene	1.46	mg/Kg	1	2.00	<0.00462	73	61.7 - 127	0	20
Toluene	1.64	mg/Kg	1	2.00	<0.00582	82	60.8 - 136	0	20
Ethylbenzene	1.63	mg/Kg	1	2.00	<0.00433	82	70.3 - 132	1	20
Xylene	5.01	mg/Kg	1	6.00	0.007	83	69.7 - 139	1	20

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

*continued ...*⁹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.46	1.49	mg/Kg	1	2	73	74	64 - 129
4-Bromofluorobenzene (4-BFB)	1.58	1.64	mg/Kg	1	2	79	82	71.8 - 133

Matrix Spike (MS-1) Spiked Sample: 237492QC Batch: 71717
Prep Batch: 61444Date Analyzed: 2010-07-14
QC Preparation: 2010-07-14Analyzed By: ER
Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.6	mg/Kg	1	20.0	<0.241	83	59.9 - 133

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	19.5	mg/Kg	1	20.0	<0.241	98	59.9 - 133	16	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.60	1.67	mg/Kg	1	2	80	84	69.3 - 122
4-Bromofluorobenzene (4-BFB)	1.87	1.98	mg/Kg	1	2	94	99	72.2 - 135

Matrix Spike (MS-1) Spiked Sample: 237491QC Batch: 71737
Prep Batch: 61466Date Analyzed: 2010-07-14
QC Preparation: 2010-07-14Analyzed By: AW
Prepared By: AW

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	268	mg/Kg	1	250	32.6	94	76 - 157

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	281	mg/Kg	1	250	32.6	99	76 - 157	5	20

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

¹⁰Matrix spike recovery out of control limits due to matrix interference Use LCS/LCSD to demonstrate analysis is under control.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	114	120	mg/Kg	1	100	114	120	55.1 - 151

Matrix Spike (MS-1) Spiked Sample: 237490QC Batch: 71784
Prep Batch: 61511Date Analyzed: 2010-07-15
QC Preparation: 2010-07-15Analyzed By: AW
Prepared By: AW

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	11400	mg/Kg	10	250	11100	120	76 - 157

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	¹¹ 12100	mg/Kg	10	250	11100	400	76 - 157	6	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	^{12,13} 362	382	mg/Kg	10	100	362	382	55.1 - 151

Matrix Spike (MS-1) Spiked Sample: 237492QC Batch: 71830
Prep Batch: 61549Date Analyzed: 2010-07-16
QC Preparation: 2010-07-16Analyzed By: ER
Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE	0.979	mg/Kg	1	2.00	<0.00981	49	10 - 93.9
Benzene	¹⁴ 1.03	mg/Kg	1	2.00	<0.00629	52	59.5 - 110
Toluene	¹⁵ 1.06	mg/Kg	1	2.00	<0.0108	53	62.2 - 116
Ethylbenzene	¹⁶ 1.10	mg/Kg	1	2.00	<0.0117	55	64.6 - 124
Xylene	¹⁷ 3.28	mg/Kg	1	6.00	<0.0145	55	68.2 - 132

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
MTBE	1.04	mg/Kg	1	2.00	<0.00981	52	10 - 93.9	6	20

*continued ...*¹¹ Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control¹² High surrogate recovery due to peak interference.¹³ High surrogate recovery due to peak interference.¹⁴ Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.¹⁵ Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control¹⁶ Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.¹⁷ Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

matrix spikes continued ...

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	¹⁸	1.60	mg/Kg	1	2.00	<0.00629	80	59.5 - 110	43	20
Toluene	¹⁹	1.68	mg/Kg	1	2.00	<0.0108	84	62.2 - 116	45	20
Ethylbenzene	²⁰	1.82	mg/Kg	1	2.00	<0.0117	91	64.6 - 124	49	20
Xylene	²¹	5.40	mg/Kg	1	6.00	<0.0145	90	68.2 - 132	49	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.94	1.96	mg/Kg	1	2	97	98	79.9 - 123
4-Bromofluorobenzene (4-BFB)	1.81	1.82	mg/Kg	1	2	90	91	73.1 - 128

Standard (CCV-1)

QC Batch: 71716

Date Analyzed: 2010-07-14

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.100	0.0848	85	80 - 120	2010-07-14
Benzene		mg/Kg	0.100	0.0863	86	80 - 120	2010-07-14
Toluene		mg/Kg	0.100	0.0901	90	80 - 120	2010-07-14
Ethylbenzene		mg/Kg	0.100	0.0864	86	80 - 120	2010-07-14
Xylene		mg/Kg	0.300	0.263	88	80 - 120	2010-07-14

Standard (CCV-2)

QC Batch: 71716

Date Analyzed: 2010-07-14

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.100	0.0898	90	80 - 120	2010-07-14
Benzene		mg/Kg	0.100	0.0861	86	80 - 120	2010-07-14
Toluene		mg/Kg	0.100	0.0892	89	80 - 120	2010-07-14
Ethylbenzene		mg/Kg	0.100	0.0803	80	80 - 120	2010-07-14
Xylene		mg/Kg	0.300	0.249	83	80 - 120	2010-07-14

Standard (CCV-1)

QC Batch: 71717

Date Analyzed: 2010-07-14

Analyzed By: ER

¹⁸MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

¹⁹MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

²⁰MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

²¹MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.986	99	80 - 120	2010-07-14

Standard (CCV-2)

QC Batch: 71717

Date Analyzed: 2010-07-14

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.04	104	80 - 120	2010-07-14

Standard (CCV-1)

QC Batch: 71737

Date Analyzed: 2010-07-14

Analyzed By: AW

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	261	104	80 - 120	2010-07-14

Standard (CCV-2)

QC Batch: 71737

Date Analyzed: 2010-07-14

Analyzed By: AW

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	253	101	80 - 120	2010-07-14

Standard (CCV-1)

QC Batch: 71784

Date Analyzed: 2010-07-15

Analyzed By: AW

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	264	106	80 - 120	2010-07-15

Standard (CCV-2)

QC Batch: 71784

Date Analyzed: 2010-07-15

Analyzed By: AW

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	249	100	80 - 120	2010-07-15

Standard (CCV-1)

QC Batch: 71830

Date Analyzed: 2010-07-16

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.100	0.0896	90	80 - 120	2010-07-16
Benzene		mg/Kg	0.100	0.0957	96	80 - 120	2010-07-16
Toluene		mg/Kg	0.100	0.0945	94	80 - 120	2010-07-16
Ethylbenzene		mg/Kg	0.100	0.0959	96	80 - 120	2010-07-16
Xylene		mg/Kg	0.300	0.290	97	80 - 120	2010-07-16

Standard (CCV-2)

QC Batch: 71830

Date Analyzed: 2010-07-16

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.100	0.0960	96	80 - 120	2010-07-16
Benzene		mg/Kg	0.100	0.102	102	80 - 120	2010-07-16
Toluene		mg/Kg	0.100	0.100	100	80 - 120	2010-07-16
Ethylbenzene		mg/Kg	0.100	0.102	102	80 - 120	2010-07-16
Xylene		mg/Kg	0.300	0.307	102	80 - 120	2010-07-16

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Project Name: Permian Oil + Gas Inc
Project Location (including state): Atsica Canyon Valley 25 Sampler Signature: [Signature]

ANALYSIS REQUEST
(Circle or Specify Method No.)

1221 Tower Trail El Paso TX 79907																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418 1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/2007	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, S04, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

Relinquished by: <u>Permian DTH</u>	Company: <u>DTH</u>	Date: <u>7-13-10</u>	Time: <u>10:35</u>	Received by: <u>Victor Ayala</u>	Company: <u>DTH</u>	Date: <u>7-13-10</u>	Time: <u>10:35</u>	INST ☐	OBS ☐	COR ☐
Relinquished by: <u>Victor Ayala</u>	Company: <u>DTH</u>	Date: <u>7-13-10</u>	Time: <u>18:00</u>	Received by: <u>Carroll Fox</u>	Company: <u>Trace</u>	Date: <u>7-14-10</u>	Time: <u>9:30</u>	INST ☒	OBS ☒	COR ☒
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ☐	OBS ☐	COR ☐

LAB USE ONLY

REMARKS:

Intact ☒ NHeadspace ☒ Y ☒ N ☒ NALog-in-Review ☒☐ Dry Weight Basis Required
☐ TRRP Report Required
☐ Check If Special Reporting Limits Are Needed

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
 Tel (915) 585-3443
 Fax (915) 585-4944
 1 (888) 588-3443

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

Company Name: Dr K Petroleum + Fluids Phone #: 915 859 8170
Address: (Street, City, Zip) 121 Towel Trail Ln El Paso Tx Fax #:
Contact Person: Victor Ayala E-mail:
Invoice to:
(If different from above)
Project #:
Project Location (including state): Artesia Carbon Valley 25 Project Name: Murchison Oil + Gas Inc
Sampler Signature: [Signature]

ANALYSIS REQUEST
(Circle or Specify Method No.)

[illegible][illegible]

LAB USE ONLY

REMARKS:

Intact Y N

Headspace Y/N/NA

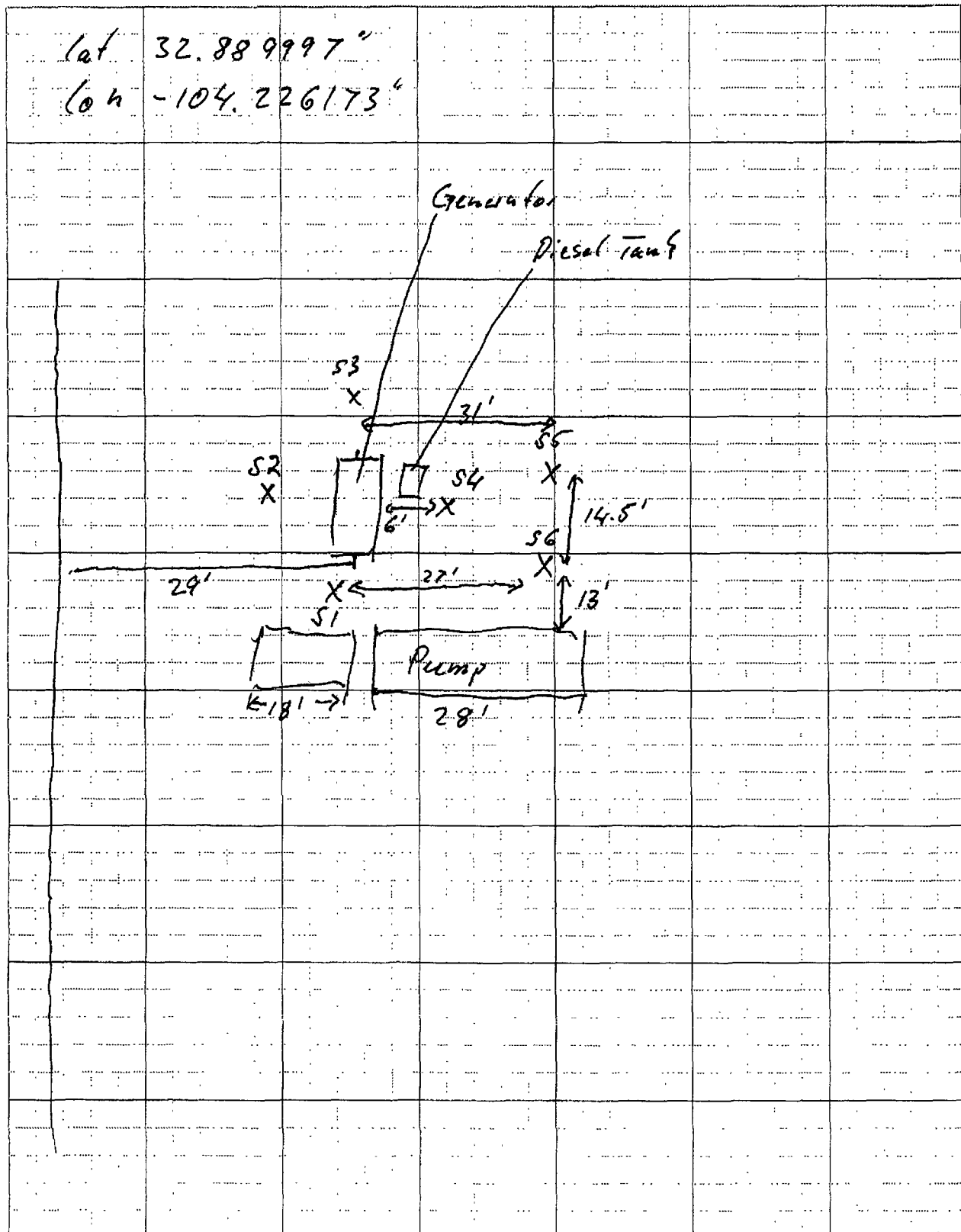
Log-in-Review

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

PROJECT: Marohison Nilesia
 PROJECT #: _____
 TASK: _____



BY: Heirus
 DATE: 7-8-10
 CHECKED BY: _____
 SHEET: _____ OF: _____



12

PROJECT: Murchison Artesia
PROJECT #: _____
TASK: HeadSpace Readings F10



BY: Meinus
DATE: 7-9-10
CHECKED BY: _____
SHEET: _____ OF: _____

		Surface	6"
S1		38.5	78.3
S2		5.3	1.5
S3		0.0	0.0
S4		27.3	53.4
S5		22.1	1.6
S6		0.0	0.0