

ANALYTICAL REPORT

Job Number: 280-6344-1

Job Description: Warren #1

For:
Colorado Oil&Gas Conservation Commision
1120 Lincoln St.
Suite 801
Denver, CO 80203
Attention: Bob Chesson



Approved for release.
Lori A Parsons
Project Manager I
8/27/2010 11:08 AM

Lori A Parsons
Project Manager I
lori.parsons@testamericainc.com
08/27/2010

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002
Tel (303) 736-0100 Fax (303) 431-7171 www.testamericainc.com



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CASE NARRATIVE

Client: Colorado Oil&Gas Conservation Commission

Project: Warren #1

Report Number: 280-6344-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 08/13/2010; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.9 degrees C.

Per client request on August 17, 2010, sodium by 6010B and chloride by 300.0 were added to the sample analyses.

VOLATILE ORGANIC COMPOUNDS (GC)

Sample WARREN #1 (280-6344-1) was analyzed for volatile organic compounds (GC) in accordance with EPA SW-846 Method 8021B. The samples were analyzed on 08/16/2010.

TestAmerica Denver's practice for the reporting of dual column data is to report the surrogates from both columns, and the preferred result for any given target analyte from the analyst selected column. The preferred results for target analytes and surrogates are reported as PRIMARY on the Sample Datasheets.

No difficulties were encountered during the VOC analysis.

All quality control parameters were within the acceptance limits.

TOTAL METALS - Sodium

Sample WARREN #1 (280-6344-1) was analyzed for total metals in accordance with EPA SW-846 Method 6010B. The samples were prepared and analyzed on 08/24/2010.

The continuing calibration verification (CCV) associated with analytical batch 28497 exhibited a percent difference above the upper control limit for sodium. The sample (MB) associated with this CCV reported hits for affected analytes but is associated with samples that are greater than 10X the level in the blank. The CCB also reported a result greater than the RL but the samples all were greater than 10X the level in the blank. All results were reported.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

ANIONS - CHLORIDE

Sample WARREN #1 (280-6344-1) was analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 08/20/2010.

No difficulties were encountered during the anions analysis.

All quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS

Sample WARREN #1 (280-6344-1) was analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 08/18/2010.

The following TDS sample of batch 27390 used a lower volume due to the nature of the sample matrix: WARREN #1 (280-6344-1). Elevated reporting limits (RLs) are provided.

No difficulties were encountered during the TDS analysis.

All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-6344-1	WARREN #1	Water	08/13/2010 1150	08/13/2010 1446

EXECUTIVE SUMMARY - Detections

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
280-6344-1	WARREN #1				
Sodium		450000 ^	1000	ug/L	6010B
Chloride		21	3.0	mg/L	300.0
Total Dissolved Solids		1300	40	mg/L	SM 2540C

METHOD SUMMARY

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC)	TAL DEN	SW846 8021B	
Purge and Trap	TAL DEN		SW846 5030B
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Metals	TAL DEN		SW846 3010A
Anions, Ion Chromatography	TAL DEN	MCAWW 300.0	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Method	Analyst	Analyst ID
SW846 8021B	Moore, Tegan E	TEM
SW846 6010B	Wells, David	DW
MCAWW 300.0	Phan, Thu L	TLP
SM SM 2540C	Domnick, Brandon J	BJD

Analytical Data

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Client Sample ID: WARREN #1

Lab Sample ID: 280-6344-1

Date Sampled: 08/13/2010 1150

Client Matrix: Water

Date Received: 08/13/2010 1446

8021B Volatile Organic Compounds (GC)

Method:	8021B	Analysis Batch: 280-28284	Instrument ID:	GCV_H
Preparation:	5030B		Initial Weight/Volume:	5 mL
Dilution:	1.0		Final Weight/Volume:	5 mL
Date Analyzed:	08/16/2010 1235		Injection Volume:	5 mL
Date Prepared:	08/16/2010 1235		Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
m-Xylene & p-Xylene	ND		0.50
o-Xylene	ND		0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	110		85 - 115

Analytical Data

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Client Sample ID: WARREN #1

Lab Sample ID: 280-6344-1

Date Sampled: 08/13/2010 1150

Client Matrix: Water

Date Received: 08/13/2010 1446

8021B Volatile Organic Compounds (GC)

Method: 8021B

Analysis Batch: 280-28284

Instrument ID: GCV_H

Preparation: 5030B

Initial Weight/Volume: 5 mL

Dilution: 1.0

Final Weight/Volume: 5 mL

Date Analyzed: 08/16/2010 1235

Injection Volume: 5 mL

Date Prepared: 08/16/2010 1235

Result Type: SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
a,a,a-Trifluorotoluene	112		85 - 115

Analytical Data

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Client Sample ID: WARREN #1

Lab Sample ID: 280-6344-1

Client Matrix: Water

Date Sampled: 08/13/2010 1150

Date Received: 08/13/2010 1446

6010B Metals (ICP)

Method: 6010B

Analysis Batch: 280-28497

Instrument ID: MT_026

Preparation: 3010A

Prep Batch: 280-27841

Lab File ID: 26b082410.txt

Dilution: 1.0

Initial Weight/Volume: 50 mL

Date Analyzed: 08/24/2010 1953

Final Weight/Volume: 50 mL

Date Prepared: 08/24/2010 0800

Analyte	Result (ug/L)	Qualifier	RL
Sodium	450000	^	1000

Analytical Data

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

General Chemistry**Client Sample ID: WARREN #1**

Lab Sample ID: 280-6344-1

Date Sampled: 08/13/2010 1150

Client Matrix: Water

Date Received: 08/13/2010 1446

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	21		mg/L	3.0	1.0	300.0
Analysis Batch: 280-28008 Date Analyzed: 08/20/2010 1518						
Total Dissolved Solids	1300		mg/L	40	1.0	SM 2540C
Analysis Batch: 280-27390 Date Analyzed: 08/18/2010 0710						

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Surrogate Recovery Report

8021B Volatile Organic Compounds (GC)

Client Matrix: Water

Lab Sample ID	Client Sample ID	TFT1 %Rec	TFT2 %Rec
280-6344-1	WARREN #1	110	112
MB 280-28284/4		106	109
LCS 280-28284/2		108	110
LCSD 280-28284/3		106	113
280-6288-C-1 MS		110	108
280-6288-C-1 MSD		110	111

Surrogate	Acceptance Limits
TFT = a,a,a-Trifluorotoluene	85-115

Quality Control Results

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Method Blank - Batch: 280-28284

Lab Sample ID: MB 280-28284/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/16/2010 1202
Date Prepared: 08/16/2010 1202

Analysis Batch: 280-28284
Prep Batch: N/A
Units: ug/L

Method: 8021B Preparation: 5030B

Instrument ID: GCV_H
Lab File ID: 204B0501.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL
Injection Volume: 5 mL
Column ID: PRIMARY

Analyte	Result	Qual	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
m-Xylene & p-Xylene	ND		0.50
o-Xylene	ND		0.50
Surrogate	% Rec	Acceptance Limits	
a,a,a-Trifluorotoluene	106	85 - 115	
Surrogate	% Rec	Acceptance Limits	
a,a,a-Trifluorotoluene	109	85 - 115	

Quality Control Results

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-28284**

**Method: 8021B
Preparation: 5030B**

LCS Lab Sample ID: LCS 280-28284/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/16/2010 1056
Date Prepared: 08/16/2010 1056

Analysis Batch: 280-28284
Prep Batch: N/A
Units: ug/L

Instrument ID: GCV_H
Lab File ID: 202B0301.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL
Injection Volume: 5 mL
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 280-28284/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/16/2010 1129
Date Prepared: 08/16/2010 1129

Analysis Batch: 280-28284
Prep Batch: N/A
Units: ug/L

Instrument ID: GCV_H
Lab File ID: 203B0401.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL
Injection Volume: 5 mL
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	104	103	75 - 117	1	45		
Ethylbenzene	109	108	79 - 115	1	46		
Toluene	105	104	77 - 115	1	45		
m-Xylene & p-Xylene	106	105	79 - 116	1	46		
o-Xylene	107	107	79 - 116	0	46		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
a,a,a-Trifluorotoluene	108		106		85 - 115		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
a,a,a-Trifluorotoluene	110		113		85 - 115		

Quality Control Results

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

**Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-28284**

**Method: 8021B
Preparation: 5030B**

LCS Lab Sample ID: LCS 280-28284/2 Units: ug/L
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/16/2010 1056
Date Prepared: 08/16/2010 1056

LCSD Lab Sample ID: LCSD 280-28284/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/16/2010 1129
Date Prepared: 08/16/2010 1129

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Benzene	20.0	20.0	20.8	20.6
Ethylbenzene	20.0	20.0	21.9	21.7
Toluene	20.0	20.0	21.1	20.8
m-Xylene & p-Xylene	40.0	40.0	42.2	42.0
o-Xylene	20.0	20.0	21.5	21.4

Quality Control Results

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 280-28284

Method: 8021B

Preparation: 5030B

MS Lab Sample ID: 280-6288-C-1 MS
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 08/16/2010 1940
 Date Prepared: 08/16/2010 1940

Analysis Batch: 280-28284
 Prep Batch: N/A

Instrument ID: GCV_H
 Lab File ID: 213B1401.D
 Initial Weight/Volume: 5 mL
 Final Weight/Volume: 5 mL
 Injection Volume: 5 mL
 Column ID: PRIMARY

MSD Lab Sample ID: 280-6288-C-1 MSD
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 08/16/2010 2013
 Date Prepared: 08/16/2010 2013

Analysis Batch: 280-28284
 Prep Batch: N/A

Instrument ID: GCV_H
 Lab File ID: 214B1501.D
 Initial Weight/Volume: 5 mL
 Final Weight/Volume: 5 mL
 Injection Volume: 5 mL
 Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	107	109	75 - 117	2	45		
Ethylbenzene	109	111	79 - 115	2	46		
Toluene	109	107	77 - 115	1	45		
m-Xylene & p-Xylene	108	107	79 - 116	0	46		
o-Xylene	112	111	79 - 116	1	46		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
a,a,a-Trifluorotoluene	110		110	85 - 115			
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
a,a,a-Trifluorotoluene	108		111	85 - 115			

Quality Control Results

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 280-28284

Method: 8021B

Preparation: 5030B

MS Lab Sample ID: 280-6288-C-1 MS

Units: ug/L

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 08/16/2010 1940

Date Prepared: 08/16/2010 1940

MSD Lab Sample ID: 280-6288-C-1 MSD

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 08/16/2010 2013

Date Prepared: 08/16/2010 2013

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Benzene	0.55	20.0	20.0	21.9	22.3
Ethylbenzene	ND	20.0	20.0	21.7	22.1
Toluene	0.89	20.0	20.0	22.6	22.4
m-Xylene & p-Xylene	3.2	40.0	40.0	46.2	46.1
o-Xylene	1.5	20.0	20.0	23.9	23.7

Quality Control Results

Client: Colorado Oil&Gas Conservation Commission

Job Number: 280-6344-1

Method Blank - Batch: 280-27841

Lab Sample ID: MB 280-27841/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 1948
Date Prepared: 08/24/2010 0800

Analysis Batch: 280-28497
Prep Batch: 280-27841
Units: ug/L

Method: 6010B
Preparation: 3010A

Instrument ID: MT_026
Lab File ID: 26b082410.txt
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Sodium	ND	^	1000

Lab Control Sample - Batch: 280-27841

Lab Sample ID: LCS 280-27841/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 1951
Date Prepared: 08/24/2010 0800

Analysis Batch: 280-28497
Prep Batch: 280-27841
Units: ug/L

Method: 6010B
Preparation: 3010A

Instrument ID: MT_026
Lab File ID: 26b082410.txt
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sodium	50000	50900	102	90 - 115	^

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-27841

Method: 6010B
Preparation: 3010A

MS Lab Sample ID: 280-6352-A-2-B MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 2003
Date Prepared: 08/24/2010 0800

Analysis Batch: 280-28497
Prep Batch: 280-27841

Instrument ID: MT_026
Lab File ID: 26b082410.txt
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-6352-A-2-C MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 2005
Date Prepared: 08/24/2010 0800

Analysis Batch: 280-28497
Prep Batch: 280-27841

Instrument ID: MT_026
Lab File ID: 26b082410.txt
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Sodium	107	116	70 - 203	2	40	^	^

Quality Control Results

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 280-27841

Method: 6010B

Preparation: 3010A

MS Lab Sample ID: 280-6352-A-2-B MS Units: ug/L
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 2003
Date Prepared: 08/24/2010 0800

MSD Lab Sample ID: 280-6352-A-2-C MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/24/2010 2005
Date Prepared: 08/24/2010 0800

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Sodium	190000	50000	50000	246000 ^	251000 ^

Serial Dilution - Batch: 280-27841

Method: 6010B

Preparation: 3010A

Lab Sample ID: 280-6352-A-2-A SD ^5
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 08/24/2010 2000
Date Prepared: 08/24/2010 0800

Analysis Batch: 280-28497
Prep Batch: 280-27841
Units: ug/L

Instrument ID: MT_026
Lab File ID: 26b082410.txt
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual	Result	%Diff	Limit	Qual
Sodium	190000	197000	2.4	10	^

Quality Control Results

Client: Colorado Oil&Gas Conservation Commission

Job Number: 280-6344-1

Method Blank - Batch: 280-28008

Method: 300.0

Preparation: N/A

Lab Sample ID: MB 280-28008/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/20/2010 0951
Date Prepared: N/A

Analysis Batch: 280-28008
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_IC7
Lab File ID: 115.TXT
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL
Chloride	ND		3.0

Method Reporting Limit Check - Batch: 280-28008

Method: 300.0

Preparation: N/A

Lab Sample ID: MRL 280-28008/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/20/2010 0904
Date Prepared: N/A

Analysis Batch: 280-28008
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_IC7
Lab File ID: 112.TXT
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	1.00	ND	102	50 - 150	

Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 280-28008

Method: 300.0

Preparation: N/A

LCS Lab Sample ID: LCS 280-28008/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/20/2010 0920
Date Prepared: N/A

Analysis Batch: 280-28008
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_IC7
Lab File ID: 113.TXT
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

LCSD Lab Sample ID: LCSD 280-28008/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/20/2010 0935
Date Prepared: N/A

Analysis Batch: 280-28008
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_IC7
Lab File ID: 114.TXT
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chloride	99	99	90 - 110	0	10		

Quality Control Results

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-28008

Method: 300.0
Preparation: N/A

LCS Lab Sample ID: LCS 280-28008/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/20/2010 0920
Date Prepared: N/A

LCSD Lab Sample ID: LCSD 280-28008/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/20/2010 0935
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chloride	25.0	25.0	24.8	24.8

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-28008

Method: 300.0
Preparation: N/A

MS Lab Sample ID: 280-6367-A-21 MS
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 08/20/2010 1605
Date Prepared: N/A

Analysis Batch: 280-28008
Prep Batch: N/A

Instrument ID: WC_IC7
Lab File ID: 121.TXT
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-6367-A-21 MSD
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 08/20/2010 1621
Date Prepared: N/A

Analysis Batch: 280-28008
Prep Batch: N/A

Instrument ID: WC_IC7
Lab File ID: 122.TXT
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	101	101	80 - 120	0	20		

Quality Control Results

Client: Colorado Oil&Gas Conservation Commission

Job Number: 280-6344-1

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 280-28008

Method: 300.0

Preparation: N/A

MS Lab Sample ID: 280-6367-A-21 MS
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 08/20/2010 1605
Date Prepared: N/A

Units: mg/L

MSD Lab Sample ID: 280-6367-A-21 MSD
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 08/20/2010 1621
Date Prepared: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chloride	50	125	125	176	176

Duplicate - Batch: 280-28008

Method: 300.0

Preparation: N/A

Lab Sample ID: 280-6367-A-21 DU
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 08/20/2010 1549
Date Prepared: N/A

Analysis Batch: 280-28008
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_IC7
Lab File ID: 120.TXT
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	50	49.1	1	15	

Quality Control Results

Client: Colorado Oil&Gas Conservation Commission

Job Number: 280-6344-1

Method Blank - Batch: 280-27390

Method: SM 2540C

Preparation: N/A

Lab Sample ID: MB 280-27390/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/18/2010 0710
Date Prepared: N/A

Analysis Batch: 280-27390
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Result	Qual	RL
Total Dissolved Solids	ND		10

Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 280-27390

Method: SM 2540C

Preparation: N/A

LCS Lab Sample ID: LCS 280-27390/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/18/2010 0710
Date Prepared: N/A

Analysis Batch: 280-27390
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-27390/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/18/2010 0710
Date Prepared: N/A

Analysis Batch: 280-27390
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Dissolved Solids	100	100	86 - 110	0	20		

Quality Control Results

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Laboratory Control/ Laboratory Duplicate Data Report - Batch: 280-27390

Method: SM 2540C
Preparation: N/A

LCS Lab Sample ID: LCS 280-27390/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/18/2010 0710
Date Prepared: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-27390/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/18/2010 0710
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Dissolved Solids	500	500	499	499

Duplicate - Batch: 280-27390

Method: SM 2540C
Preparation: N/A

Lab Sample ID: 280-6314-A-2 DU
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/18/2010 0710
Date Prepared: N/A

Analysis Batch: 280-27390
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Dissolved Solids	1300	1310	0	20	

DATA REPORTING QUALIFIERS

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Lab Section	Qualifier	Description
Metals	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

Quality Control Results

Client: Colorado Oil&Gas Conservation Commission

Job Number: 280-6344-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Analysis Batch:280-28284					
LCS 280-28284/2	Lab Control Sample	T	Water	8021B	
LCSD 280-28284/3	Lab Control Sample Duplicate	T	Water	8021B	
MB 280-28284/4	Method Blank	T	Water	8021B	
280-6288-C-1 MS	Matrix Spike	T	Water	8021B	
280-6288-C-1 MSD	Matrix Spike Duplicate	T	Water	8021B	
280-6344-1	WARREN #1	T	Water	8021B	

Report Basis

T = Total

Metals

Prep Batch: 280-27841					
LCS 280-27841/2-A	Lab Control Sample	T	Water	3010A	
MB 280-27841/1-A	Method Blank	T	Water	3010A	
280-6344-1	WARREN #1	T	Water	3010A	
280-6352-A-2-B MS	Matrix Spike	T	Water	3010A	
280-6352-A-2-C MSD	Matrix Spike Duplicate	T	Water	3010A	
Analysis Batch:280-28497					
LCS 280-27841/2-A	Lab Control Sample	T	Water	6010B	280-27841
MB 280-27841/1-A	Method Blank	T	Water	6010B	280-27841
280-6344-1	WARREN #1	T	Water	6010B	280-27841
280-6352-A-2-B MS	Matrix Spike	T	Water	6010B	280-27841
280-6352-A-2-C MSD	Matrix Spike Duplicate	T	Water	6010B	280-27841

Report Basis

T = Total

Quality Control Results

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-27390					
LCS 280-27390/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-27390/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-27390/1	Method Blank	T	Water	SM 2540C	
280-6314-A-2 DU	Duplicate	T	Water	SM 2540C	
280-6344-1	WARREN #1	T	Water	SM 2540C	
Analysis Batch:280-28008					
LCS 280-28008/4	Lab Control Sample	T	Water	300.0	
LCSD 280-28008/5	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-28008/6	Method Blank	T	Water	300.0	
280-6344-1	WARREN #1	T	Water	300.0	
280-6367-A-21 DU	Duplicate	T	Water	300.0	
280-6367-A-21 MS	Matrix Spike	T	Water	300.0	
280-6367-A-21 MSD	Matrix Spike Duplicate	T	Water	300.0	

Report Basis

T = Total

Quality Control Results

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Laboratory Chronicle

Lab ID: 280-6344-1

Client ID: WARREN #1

Sample Date/Time: 08/13/2010 11:50

Received Date/Time: 08/13/2010 14:46

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-6344-D-1		280-28284		08/16/2010 12:35	1	TAL DEN	TEM
A:8021B	280-6344-D-1		280-28284		08/16/2010 12:35	1	TAL DEN	TEM
P:3010A	280-6344-A-1-A		280-28497	280-27841	08/24/2010 08:00	1	TAL DEN	KMN
A:6010B	280-6344-A-1-A		280-28497	280-27841	08/24/2010 19:53	1	TAL DEN	DW
A:300.0	280-6344-A-1		280-28008		08/20/2010 15:18	1	TAL DEN	TLP
A:SM 2540C	280-6344-A-1		280-27390		08/18/2010 07:10	1	TAL DEN	BJD

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 280-28284/4		280-28284		08/16/2010 12:02	1	TAL DEN	TEM
A:8021B	MB 280-28284/4		280-28284		08/16/2010 12:02	1	TAL DEN	TEM
P:3010A	MB 280-27841/1-A		280-28497	280-27841	08/24/2010 08:00	1	TAL DEN	KMN
A:6010B	MB 280-27841/1-A		280-28497	280-27841	08/24/2010 19:48	1	TAL DEN	DW
A:300.0	MB 280-28008/6		280-28008		08/20/2010 09:51	1	TAL DEN	TLP
A:SM 2540C	MB 280-27390/1		280-27390		08/18/2010 07:10	1	TAL DEN	BJD

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 280-28284/2		280-28284		08/16/2010 10:56	1	TAL DEN	TEM
A:8021B	LCS 280-28284/2		280-28284		08/16/2010 10:56	1	TAL DEN	TEM
P:3010A	LCS 280-27841/2-A		280-28497	280-27841	08/24/2010 08:00	1	TAL DEN	KMN
A:6010B	LCS 280-27841/2-A		280-28497	280-27841	08/24/2010 19:51	1	TAL DEN	DW
A:300.0	LCS 280-28008/4		280-28008		08/20/2010 09:20	1	TAL DEN	TLP
A:SM 2540C	LCS 280-27390/2		280-27390		08/18/2010 07:10	1	TAL DEN	BJD

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCSD 280-28284/3		280-28284		08/16/2010 11:29	1	TAL DEN	TEM
A:8021B	LCSD 280-28284/3		280-28284		08/16/2010 11:29	1	TAL DEN	TEM
A:300.0	LCSD 280-28008/5		280-28008		08/20/2010 09:35	1	TAL DEN	TLP
A:SM 2540C	LCSD 280-27390/3		280-27390		08/18/2010 07:10	1	TAL DEN	BJD

Quality Control Results

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Laboratory Chronicle

Lab ID: MRL

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	MRL 280-28008/3		280-28008		08/20/2010 09:04	1	TAL DEN	TLP

Lab ID: MS

Client ID: N/A

Sample Date/Time: 08/12/2010 12:25

Received Date/Time: 08/12/2010 15:08

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-6288-C-1 MS		280-28284		08/16/2010 19:40	1	TAL DEN	TEM
A:8021B	280-6288-C-1 MS		280-28284		08/16/2010 19:40	1	TAL DEN	TEM
P:3010A	280-6352-A-2-B MS		280-28497	280-27841	08/24/2010 08:00	1	TAL DEN	KMN
A:6010B	280-6352-A-2-B MS		280-28497	280-27841	08/24/2010 20:03	1	TAL DEN	DW
A:300.0	280-6367-A-21 MS		280-28008		08/20/2010 16:05	5	TAL DEN	TLP

Lab ID: MSD

Client ID: N/A

Sample Date/Time: 08/12/2010 12:25

Received Date/Time: 08/12/2010 15:08

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-6288-C-1 MSD		280-28284		08/16/2010 20:13	1	TAL DEN	TEM
A:8021B	280-6288-C-1 MSD		280-28284		08/16/2010 20:13	1	TAL DEN	TEM
P:3010A	280-6352-A-2-C MSD		280-28497	280-27841	08/24/2010 08:00	1	TAL DEN	KMN
A:6010B	280-6352-A-2-C MSD		280-28497	280-27841	08/24/2010 20:05	1	TAL DEN	DW
A:300.0	280-6367-A-21 MSD		280-28008		08/20/2010 16:21	5	TAL DEN	TLP

Lab ID: DU

Client ID: N/A

Sample Date/Time: 08/13/2010 12:15

Received Date/Time: 08/14/2010 08:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-6367-A-21 DU		280-28008		08/20/2010 15:49	5	TAL DEN	TLP
A:SM 2540C	280-6314-A-2 DU		280-27390		08/18/2010 07:10	1	TAL DEN	BJD

Lab ID: SD

Client ID: N/A

Sample Date/Time: 08/13/2010 15:45

Received Date/Time: 08/13/2010 16:47

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3010A	280-6352-A-2-A SD		280-28497	280-27841	08/24/2010 08:00	5	TAL DEN	KMN
	^5							
A:6010B	280-6352-A-2-A SD		280-28497	280-27841	08/24/2010 20:00	5	TAL DEN	DW
	^5							

Lab References:

TAL DEN = TestAmerica Denver

TestAmerica Denver

A = Analytical Method P = Prep Method

Method 8021B

Volatile Organic Compounds (GC) by
Method 8021B

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-6344-1
 SDG No.: _____
 Client Sample ID: WARREN #1 Lab Sample ID: 280-6344-1
 Matrix: Water Lab File ID: 205B0601.D
 Analysis Method: 8021B Date Collected: 08/13/2010 11:50
 Sample wt/vol: 5(mL) Date Analyzed: 08/16/2010 12:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX 502.2 (60) ID: 0.53(mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28284 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.50	0.065
100-41-4	Ethylbenzene	ND		0.50	0.10
108-88-3	Toluene	ND		0.50	0.17
179601-23-1	m-Xylene & p-Xylene	ND		0.50	0.19
95-47-6	o-Xylene	ND		0.50	0.23

CAS NO.	SURROGATE	%REC	LIMITS	Q
98-08-8	a,a,a-Trifluorotoluene	110	85-115	

TestAmerica

VOLATILE REPORT SOW 3/90

Data file : \\DenSvr03\Public\chem\GCV\GC_H.i\0816101.B\205B0601.D
 Lab Smp Id: 280-6344-D-1 Client Smp ID: WARREN #1
 Inj Date : 16-AUG-2010 12:35
 Operator : TM Inst ID: GC_H.i
 Smp Info : 280-6344-D-1
 Misc Info : 280-6344-D-1
 Comment : REV. OLM01.1.1
 Method : \\DenSvr03\Public\chem\GCV\GC_H.i\0816101.B\H1.m
 Meth Date : 23-Aug-2010 20:16 mooret Quant Type: ISTD
 Cal Date : 12-AUG-2010 16:53 Cal File: 203B0801.D
 Als bottle: 205
 Dil Factor: 1.00000
 Integrator: Falcon Compound Sublist: Arom.A.01.sub
 Target Version: 4.14
 Processing Host: DENPC124

Concentration Formula: Amt * DF * Vp/Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vp	5.000	final purge volume (ml)
Vs	5.000	vlm of sample added to purge vessel (ml)
Cpnd Variable		Local Compound Variable

Compounds	CONCENTRATIONS					
	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/L)
1 Methyl tert-butylether				Compound Not Detected.		
2 Benzene				Compound Not Detected.		
\$ 3 Trifluorotoluene	7.293	7.273	(0.642)	167028	33.0115	33.0115
4 Toluene				Compound Not Detected.		
* 5 1-Chloro-4-fluorobenzene	11.363	11.366	(1.000)	254111	30.0000	
6 Chlorobenzene				Compound Not Detected.		
7 Ethylbenzene				Compound Not Detected.		
8 m+p-Xylene				Compound Not Detected.		
9 o-Xylene				Compound Not Detected.		
11 1,3-Dichlorobenzene				Compound Not Detected.		
12 1,4-Dichlorobenzene				Compound Not Detected.		
13 1,2-Dichlorobenzene				Compound Not Detected.		
M 16 Total Xylene				Compound Not Detected.		

Data File: 205B0601.D

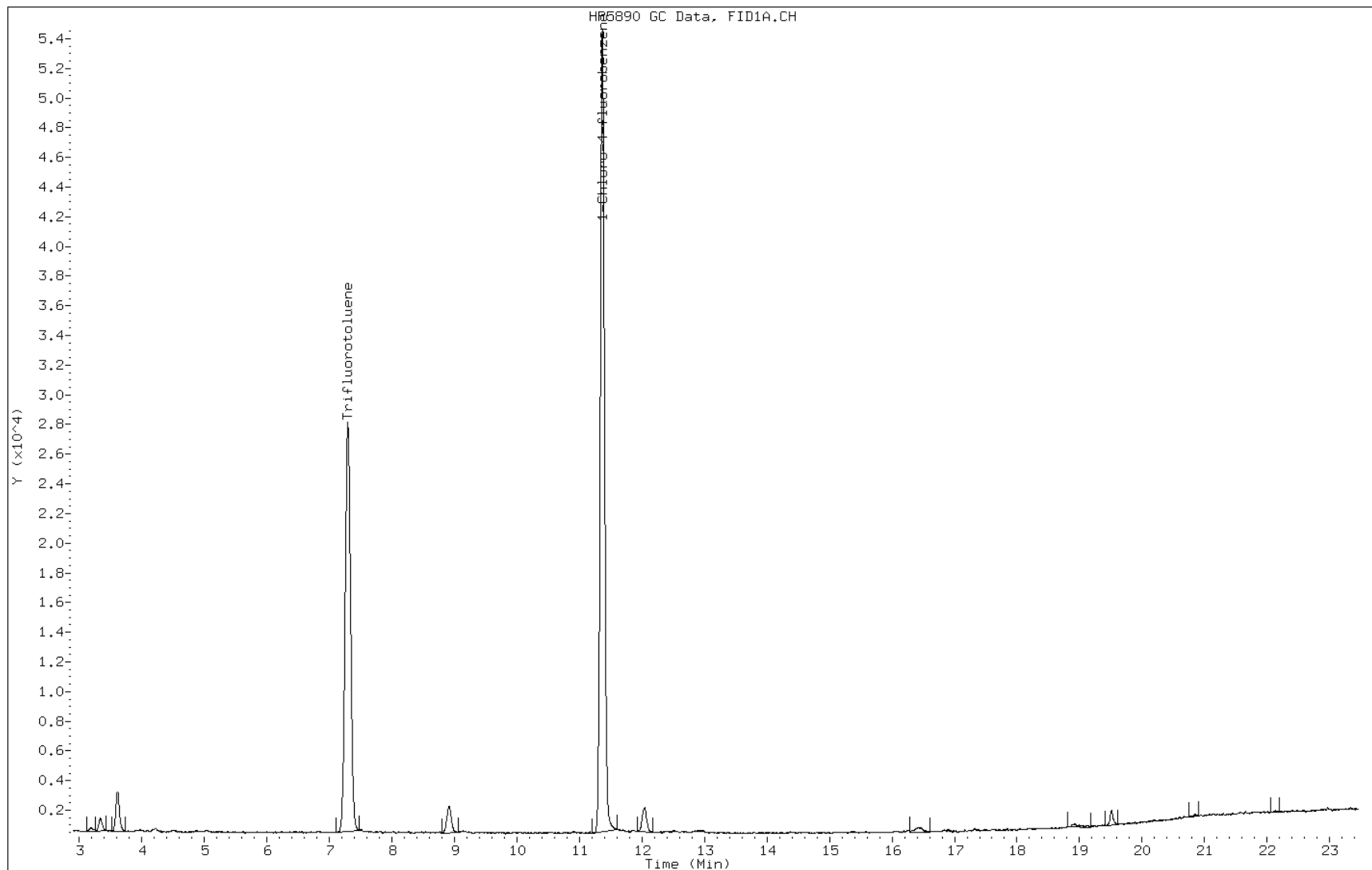
Date: 16-AUG-2010 12:35

Client ID: WARREN #1

Instrument: GC_H.i

Sample Info: 280-6344-D-1

Operator: TM



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-6344-1
SDG No.: _____
Client Sample ID: WARREN #1 Lab Sample ID: 280-6344-1
Matrix: Water Lab File ID: 205B0601.D
Analysis Method: 8021B Date Collected: 08/13/2010 11:50
Sample wt/vol: 5(mL) Date Analyzed: 08/16/2010 12:35
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: RTX-1 (60.53) ID: 0.53(mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 28284 Units: ug/L

CAS NO.	SURROGATE	%REC	LIMITS	Q
98-08-8	a,a,a-Trifluorotoluene	112	85-115	

TestAmerica

VOLATILE REPORT SOW 3/90

Data file : \\DenSvr03\Public\chem\GCV\GC_H.i\0816102.B\205B0601.D
Lab Smp Id: 280-6344-D-1 Client Smp ID: WARREN #1
Inj Date : 16-AUG-2010 12:35
Operator : TM Inst ID: GC_H.i
Smp Info : 280-6344-D-1
Misc Info : 280-6344-D-1
Comment : REV. OLM01.1.1
Method : \\DenSvr03\Public\chem\GCV\GC_H.i\0816102.B\H2.m
Meth Date : 23-Aug-2010 20:50 mooret Quant Type: ISTD
Cal Date : 12-AUG-2010 16:53 Cal File: 203B0801.D
Als bottle: 205
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Arom.A.01.sub
Target Version: 4.14
Processing Host: DENPC124

Concentration Formula: Amt * DF * Vp/Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vp	5.000	final purge volume (ml)
Vs	5.000	vlm of sample added to purge vessel (ml)
Cpnd Variable		Local Compound Variable

Compounds	CONCENTRATIONS					
	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/L)
1 Methyl tert-butylether				Compound Not Detected.		
2 Benzene				Compound Not Detected.		
\$ 3 Trifluorotoluene	6.640	6.620	(0.665)	292463	33.5499	33.5499
4 Toluene				Compound Not Detected.		
* 5 1-Chloro-4-fluorobenzene	9.980	9.970	(1.000)	432519	30.0000	
6 Chlorobenzene				Compound Not Detected.		
7 Ethylbenzene				Compound Not Detected.		
8 m+p-Xylene				Compound Not Detected.		
9 o-Xylene				Compound Not Detected.		
11 1,3-Dichlorobenzene				Compound Not Detected.		
12 1,4-Dichlorobenzene				Compound Not Detected.		
13 1,2-Dichlorobenzene				Compound Not Detected.		
M 16 Total Xylene				Compound Not Detected.		

Data File: 205B0601.D

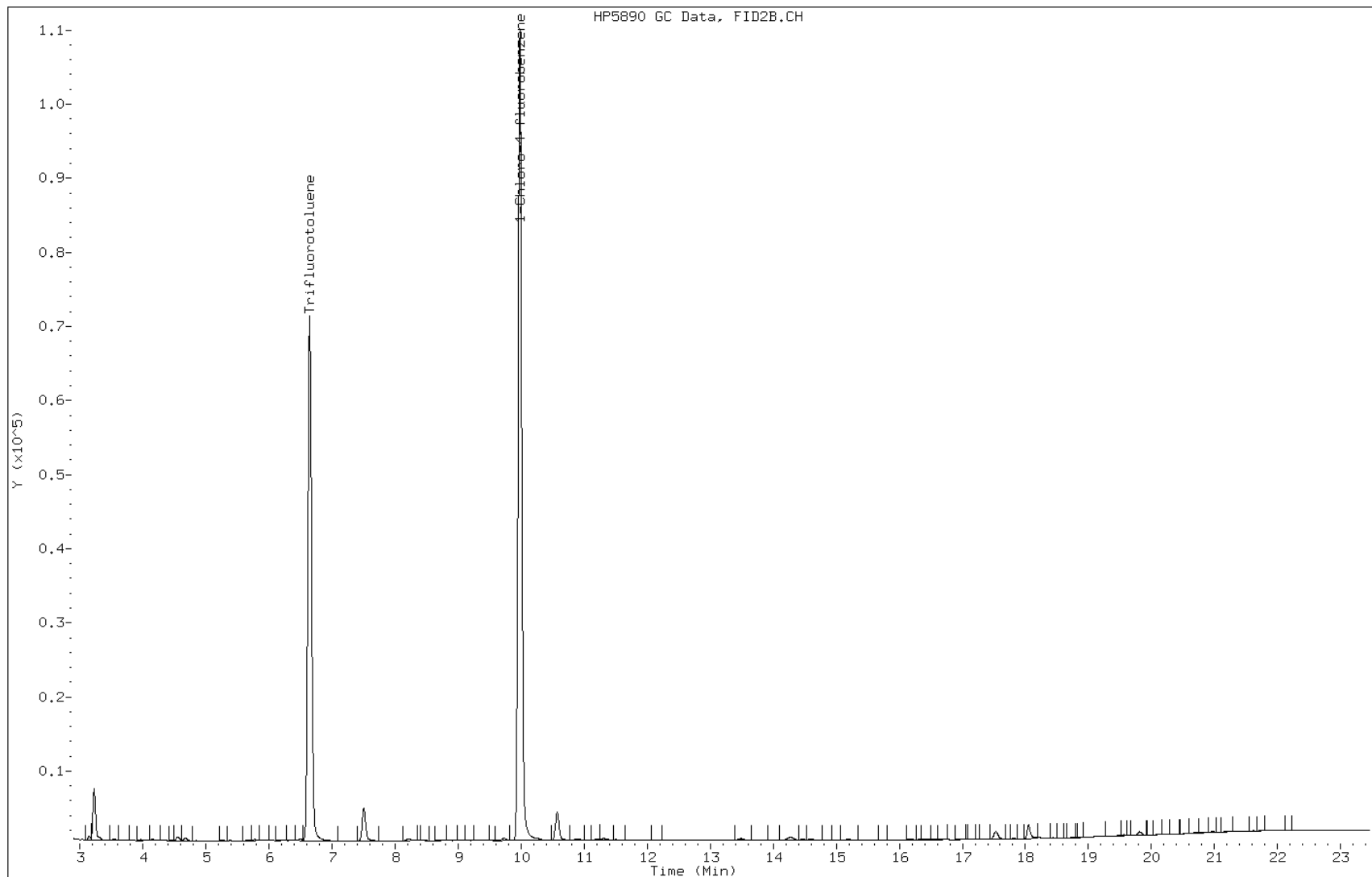
Date: 16-AUG-2010 12:35

Client ID: WARREN #1

Instrument: GC_H.i

Sample Info: 280-6344-D-1

Operator: TM



Shipping and Receiving Documents

Login Sample Receipt Check List

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-6344-1

Login Number: 6344

List Source: TestAmerica Denver

Creator: Miller, Lisa

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background		
The cooler's custody seal, if present, is intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the sample IDs on the containers and the COC.		
Samples are received within Holding Time.		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	False	LARGE AIR BUBBLE IN 1 OF 3 VIALS
If necessary, staff have been informed of any short hold time or quick TAT needs		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		