



Technical Report for

HRL Compliance Solutions

Antero Wasatch Bench

Accutest Job Number: D10688

Sampling Date: 01/27/10

Report to:

HRL Compliance Solutions
744 Horizon Court Suite 140
Grand Junction, CO 81506
mmumby@hrlcomp.com

ATTN: Mark Mumby

Total number of pages in report: **19**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Gary K. Ward
Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.



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Sample Summary

HRL Compliance Solutions

Job No: D10688

Antero Wasatch Bench

Sample Number	Collected		Matrix			Client Sample ID
	Date	Time By	Received	Code	Type	
D10688-1	01/27/10	16:30 JR	01/29/10	AQ	Water	POND OUT 012710

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: HRL Compliance Solutions

Job No D10688

Site: Antero Wasatch Bench

Report Dat 2/10/2010 4:28:51 PM

On 01/29/2010, one (1) sample was received at Accutest Laboratories at a temperature of 4.0°C. The samples were intact and properly preserved, unless noted below. An Accutest Job Number of D10688 was assigned to the project. The laboratory sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ

Batch ID: V5V317

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Samples D10702-2MS and D10702-2MSD were used as the QC samples indicated.

Wet Chemistry By Method EPA 418.1

Matrix AQ

Batch ID: GP1397

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover



Sample Results

Report of Analysis

Report of Analysis

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Client Sample ID: POND OUT 012710	
Lab Sample ID: D10688-1	Date Sampled: 01/27/10
Matrix: AQ - Water	Date Received: 01/29/10
Method: SW846 8260B	Percent Solids: n/a
Project: Antero Wasatch Bench	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V06067.D	100	02/05/10	DC	n/a	n/a	V5V317
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics+ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	4730	100	40	ug/l	
108-88-3	Toluene	11500	200	100	ug/l	
100-41-4	Ethylbenzene	547	200	100	ug/l	
	m,p-Xylene	6100	400	110	ug/l	
95-47-6	o-Xylene	1190	200	100	ug/l	
	TPH-GRO (C6-C10)	69400	20000	20000	ug/l	
110-54-3	Hexane	383	400	100	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	81%		70-130%
2037-26-5	Toluene-D8	82%		70-130%
460-00-4	4-Bromofluorobenzene	76%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: POND OUT 012710	Date Sampled: 01/27/10
Lab Sample ID: D10688-1	Date Received: 01/29/10
Matrix: AQ - Water	Percent Solids: n/a
Project: Antero Wasatch Bench	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Petroleum Hydrocarbons	56.5	5.0	mg/l	10	02/02/10	SWT	EPA 418.1

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES AGREEMENT **
Evergreen Analytical Laboratory

D10688

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CLIENT INFORMATION

Mail **Original** Report to: HRH Compliance Solutions, Inc.
 Attn: Mark Mumbay
 Address: 744 Horizon Ct Suite 140
 City: Grand Junction State: CO Zip: 81506
 Tel #: 970-243-3271 Fax #: 970-243-3280 E-mail: mmumbay@hrhcomp.com

Quality Data on Time®



4036 Youngfield St.
 Wheat Ridge, Colorado 80033
 (303) 425-6021
 FAX (303) 425-6854
 (877) 737-4521
 e-mail info@evergreenanalytical.com

Report Results by: _____ (Date)*
 Standard 2 working weeks
 UST Analyses per Fee Schedule
 * Rush: less than 24 hrs, 150% 1 - 2 work days, 100%
 3 - 5 work days, 50% 6 - 9 work days, 25%
 *Subject to surcharge & exceptions noted in fee schedule.

REPORT ALSO BY FAX PDF EDD FAXED CONFIRMATION OF SAMPLE RECEIPT REQUIRED? YES

REPORT CHROMATOGRAMS YES

Mail Invoice to: As Above
 Attn: _____
 Address: _____
 City: _____ State: _____ Zip: _____
 Tel #: _____ Fax #: _____
 Project ID# Antero Wessatch Bench
 P.O. _____ Quote _____
 Sampler: KR

NOTE: Identify Known Hazards Below

SAMPLE IDENTIFICATION	DATE SAMPLED	TIME
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No. of Containers	MATRIX			ANALYSES (check analysis)												For Laboratory Use Only		
	1) Drinking Water or 2) Discharge Water or 3) Ground Water (circle)	Soil / Solid / Air / Gas	Oil / Sludge / Wipe	1	2	3	4	5	6	7	8	9	10	11	12	W.O.#	B.O.F.#	
3	X																D10688	NA
																	NA	NA
																	C / SedX	NA
																	Temp. °C 4.0 / Ice ✓	NA
																	Seals Present Y / N / NA	NA
																	Samples Pres. Y / N / NA	NA
																	Headspace Y / N / NA	NA
																	By: <u>P</u>	
																	01	
																	Also - TEPH proc	
																	Kremity	
																	Loc. 0272, II	
																	Sample Fraction	

Does this analysis involve property transfer? Yes or No

Instructions: Send one Extra 4ml vial in box of beakers BTEXdHexene by 8260

** Important Note: See reverse side hereof for terms and conditions.

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<u>McL E. Mumbay</u>	<u>11/28/10 17:10</u>					<u>[Signature]</u>	<u>1-29-10 9:00</u>

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D10688
NOTES

AMS Sample

Sent: Mon 2/1/2010 11:55 AM

From: Shea Greiner
To: AMS Sample
Cc:
Subject: FW: Antero Samples
Attachments:

Thought I forwarded this to you.
Sample will have to stay in house because of the 8260 BTEX, Hexane and TVPH. He does need the TRPH as well.....

From: Mark Mumby [mailto:mmumby@hrlcomp.com]
Sent: Friday, January 29, 2010 1:40 PM
To: Shea Greiner
Subject: RE: Antero Samples

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Mark E. Mumby, RPG

Project Manager

HRL Compliance Solutions

Office: 970-243-3271

Cell: 970-260-1576

email: mmumby@hrlcomp.com

From: Shea Greiner [mailto:SheaG@accutest.com]
Sent: Friday, January 29, 2010 1:30 PM
To: Mark Mumby; Shea Greiner
Subject: RE: Antero Samples

Is it ok to run the TVPH by 8015 or do they need it by 8260?

<https://owa.accutest.com/exchange/AMS-Sample/Inbox/FW:%20Antero%20Samples.EML?...> 2/1/2010

D10688: Chain of Custody
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D10688
NOTES

From: Mark Mumby [mailto:mmumby@hrlcomp.com]
Sent: Friday, January 29, 2010 1:28 PM
To: Shea Greiner
Subject: Antero Samples

For once my feeble brain was right. They want BTEX, Hexane by 8260. They DO want TVPH, and TRPH. Sorry for the confusion

Mark E. Mumby, RPG

Project Manager

HRL Compliance Solutions

Office: 970-243-3271

Cell: 970-260-1576

email: mmumby@hrlcomp.com

https://owa.accutest.com/exchange/AMS-Sample/Inbox/FW:%20Antero%20Samples.EML?... 2/1/2010

D10688: Chain of Custody
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GC/MS Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D10688
Account: HRLCCOGJ HRL Compliance Solutions
Project: Antero Wasatch Bench

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V317-MB1	5V06064.D	1	02/05/10	DC	n/a	n/a	V5V317

The QC reported here applies to the following samples:

Method: SW846 8260B

D10688-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
110-54-3	Hexane	ND	4.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
95-47-6	m,p-Xylene	ND	4.0	1.1	ug/l	
	o-Xylene	ND	2.0	1.0	ug/l	
	TPH-GRO (C6-C10)	ND	200	200	ug/l	

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	100% 70-130%
2037-26-5	Toluene-D8	97% 70-130%
460-00-4	4-Bromofluorobenzene	89% 70-130%

Blank Spike Summary

Job Number: D10688
Account: HRLCCOGJ HRL Compliance Solutions
Project: Antero Wasatch Bench

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V317-BS2	5V06066.D	1	02/05/10	DC	n/a	n/a	V5V317

The QC reported here applies to the following samples:

Method: SW846 8260B

D10688-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
	TPH-GRO (C6-C10)	2200	1720	78	70-130

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D10688
Account: HRLCCOGJ HRL Compliance Solutions
Project: Antero Wasatch Bench

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D10702-2MS	5V06069.D	1	02/05/10	DC	n/a	n/a	V5V317
D10702-2MSD	5V06070.D	1	02/05/10	DC	n/a	n/a	V5V317
D10702-2	5V06068.D	1	02/05/10	DC	n/a	n/a	V5V317

The QC reported here applies to the following samples:

Method: SW846 8260B

D10688-1

CAS No.	Compound	D10702-2 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	50	48.5	97	49.2	98	1	59-132/30
100-41-4	Ethylbenzene	ND	50	49.4	99	49.9	100	1	68-130/30
110-54-3	Hexane	ND	50	57.6	115	57.9	116	1	70-130/30
108-88-3	Toluene	ND	50	44.8	90	44.5	89	1	56-142/30
95-47-6	m,p-Xylene	ND	50	42.1	84	41.8	84	1	36-146/30
	o-Xylene	ND	50	45.5	91	45.3	91	0	36-146/30

CAS No.	Surrogate Recoveries	MS	MSD	D10702-2	Limits
17060-07-0	1,2-Dichloroethane-D4	86%	82%	87%	70-130%
2037-26-5	Toluene-D8	86%	86%	82%	70-130%
460-00-4	4-Bromofluorobenzene	91%	91%	74%	70-130%

5.3.1
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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D10688
Account: HRLCCOGJ HRL Compliance Solutions
Project: Antero Wasatch Bench

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D10702-2MS	5V06071.D	1	02/05/10	DC	n/a	n/a	V5V317
D10702-2MSD	5V06072.D	1	02/05/10	DC	n/a	n/a	V5V317
D10702-2	5V06068.D	1	02/05/10	DC	n/a	n/a	V5V317

The QC reported here applies to the following samples:

Method: SW846 8260B

D10688-1

CAS No.	Compound	D10702-2 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	2200	1780	81	2040	93	14	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D10702-2	Limits
17060-07-0	1,2-Dichloroethane-D4			87%	70-130%
2037-26-5	Toluene-D8			82%	70-130%
460-00-4	4-Bromofluorobenzene			74%	70-130%

5.3.2
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General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D10688
Account: HRLCCOGJ - HRL Compliance Solutions
Project: Antero Wasatch Bench

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Petroleum Hydrocarbons	GP1397/GN3076	0.50	0.0	mg/l	1.7	1.7	102.4	80-120%

Associated Samples:
Batch GP1397: D10688-1
(*) Outside of QC limits

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BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D10688
Account: HRLCCOGJ - HRL Compliance Solutions
Project: Antero Wasatch Bench

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Petroleum Hydrocarbons	GP1397/GN3076	mg/l	1.7	1.9		20%

Associated Samples:
Batch GP1397: D10688-1
(*) Outside of QC limits

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