TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-114404-1
TestAmerica Sample Delivery Group: 17-3171
Client Project/Site: Fauser Oil Company Walford

For:
Van Winkle-Jacobs Engineering
dba VJ Engineering
2570 Holiday Road
Coralville, Iowa 52241

Attn: James Goodrich

Angela Muehling

Authorized for release by:
9/21/2017 12:27:57 PM

Angela Muehling, Project Manager I
(319)277-2401
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Job ID: 310-114404-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-114404-1

Comments
No additional comments.

Receipt
The sample was received on 9/15/2017 3:40 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3º C.

GC VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: Van Winkle-Jacobs Engineering
Project/Site: Fauser Oil Company Walford

TestAmerica Job ID: 310-114404-1
SDG: 17-3171

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-114404-1	CITGO Well # 42248	Drinking Water	09/14/17 15:00	09/15/17 15:40

Detection Summary

Client: Van Winkle-Jacobs Engineering
Project/Site: Fauser Oil Company Walford

TestAmerica Job ID: 310-114404-1
SDG: 17-3171

Client Sample ID: CITGO Well # 42248 — **Lab Sample ID: 310-114404-1**

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Van Winkle-Jacobs Engineering
Project/Site: Fauser Oil Company Walford

TestAmerica Job ID: 310-114404-1
SDG: 17-3171

Client Sample ID: CITGO Well # 42248
Date Collected: 09/14/17 15:00
Date Received: 09/15/17 15:40
Sampler Name: James Goodrich

Lab Sample ID: 310-114404-1
Matrix: Drinking Water
Sampler Phone Number: 319-338-4939

Method: OA-1 (GC) - Volatile Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<2.00		2.00		ug/L			09/20/17 07:58	1
Toluene	<2.00		2.00		ug/L			09/20/17 07:58	1
Ethylbenzene	<2.00		2.00		ug/L			09/20/17 07:58	1
Xylenes, Total	<6.00		6.00		ug/L			09/20/17 07:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 150*		*09/20/17 07:58*	*1*

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: Van Winkle-Jacobs Engineering
Project/Site: Fauser Oil Company Walford

TestAmerica Job ID: 310-114404-1
SDG: 17-3171

Method: OA-1 (GC) - Volatile Petroleum Hydrocarbons (GC)

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
		BFB								
Lab Sample ID	Client Sample ID	(48-150)								
310-114404-1	CITGO Well # 42248	95								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: OA-1 (GC) - Volatile Petroleum Hydrocarbons (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
		BFB								
Lab Sample ID	Client Sample ID	(48-150)								
LCS 310-179342/2	Lab Control Sample	127								
MB 310-179342/1	Method Blank	113								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: OA-1 (GC) - Volatile Petroleum Hydrocarbons (GC)

Lab Sample ID: MB 310-179342/1
Matrix: Water
Analysis Batch: 179342

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<2.00		2.00		ug/L			09/20/17 01:43	1
Toluene	<2.00		2.00		ug/L			09/20/17 01:43	1
Ethylbenzene	<2.00		2.00		ug/L			09/20/17 01:43	1
Xylenes, Total	<6.00		6.00		ug/L			09/20/17 01:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*48 - 150*		*09/20/17 01:43*	*1*

Lab Sample ID: LCS 310-179342/2
Matrix: Water
Analysis Batch: 179342

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			80.0	84.30		ug/L		105	78 - 121		
Toluene			80.0	85.00		ug/L		106	79 - 119		
Ethylbenzene			80.0	84.73		ug/L		106	78 - 118		
Xylenes, Total			240	231.6		ug/L		96	77 - 117		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*127*		*48 - 150*

QC Association Summary

Client: Van Winkle-Jacobs Engineering
Project/Site: Fauser Oil Company Walford

TestAmerica Job ID: 310-114404-1
SDG: 17-3171

GC VOA

Analysis Batch: 179342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-114404-1	CITGO Well # 42248	Total/NA	Drinking Water	OA-1 (GC)	
MB 310-179342/1	Method Blank	Total/NA	Water	OA-1 (GC)	
LCS 310-179342/2	Lab Control Sample	Total/NA	Water	OA-1 (GC)	

Lab Chronicle

Client: Van Winkle-Jacobs Engineering
Project/Site: Fauser Oil Company Walford

TestAmerica Job ID: 310-114404-1
SDG: 17-3171

Client Sample ID: CITGO Well # 42248
Date Collected: 09/14/17 15:00
Date Received: 09/15/17 15:40

Lab Sample ID: 310-114404-1
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OA-1 (GC)		1	179342	09/20/17 07:58	CMM	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: Van Winkle-Jacobs Engineering
Project/Site: Fauser Oil Company Walford

TestAmerica Job ID: 310-114404-1
SDG: 17-3171

Laboratory: TestAmerica Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	IA100001 (OR)	09-29-17 *
Illinois	NELAP	5	200024	11-29-17
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-18
Minnesota	NELAP	5	019-999-319	12-31-17
Minnesota (Petrofund)	State Program	1	3349	08-22-17 *
North Dakota	State Program	8	R-186	09-29-17 *
Oregon	NELAP	10	IA100001	09-29-17 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Van Winkle-Jacobs Engineering
Project/Site: Fauser Oil Company Walford

TestAmerica Job ID: 310-114404-1
SDG: 17-3171

Method	Method Description	Protocol	Laboratory
OA-1 (GC)	Volatile Petroleum Hydrocarbons (GC)	Iowa DNR	TAL CF

Protocol References:

Iowa DNR = Iowa Department of Natural Resources

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

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310-114404 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: VJ Engineering

City/State: Coralville IA | Project: Fauser Oil Co.

Receipt Information

Date/Time Received: 09.15.17 1540 | Received By: GL

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☐ Yes ☒ No *If yes:* Cooler # ____ of ____

Cooler Custody Seals Present? ☐ Yes ☒ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☒ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☒ No *If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☐ Wet ice ☒ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: G | Correction Factor (°C): -0.1

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 3.4 | Corrected Temp (°C): 3.3

• **Sample Container Temperature**

Sample ID(s) & bottle type used: CONTAINER 1 | CONTAINER 2

Uncorrected Temp (°C): TEMP 1 TEMP 2 | Corrected Temp (°C): TEMP 1 TEMP 2

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

Cedar Falls
704 Enterprise Drive

Cedar Falls, IA 50613
phone 319.277.2401 fax 319.277.2425

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TestAmerica Laboratories, Inc.

Client Contact	Project Manager: JEG	Site Contact:JEG	9/15/2017	COC No:
VJ Engineering	Tel/Fax:	Lab Contact:	Carrier:	1 of 1 COCs
2570 Holiday Road	Analysis Turnaround Time			
Coralville, Iowa 52241	Calendar (C) or Work Days (W)			
(319) 338-4939 Phone (319) 855-2843	TAT if different from Below ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			SDG No.
Project Name: Fauser Oil Company Walford				
Site: 17-3171				

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	BTEX	Sample Specific Notes:
CITGO Well # 42248	9/14/17	15:00	G	DW	4		X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by: James E. Goodrich	Company: VJ Engineering	Date/Time: 15:17 9-15-17	Received by:	Company: TACF	Date/Time: 9-15-17 1540
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Form No. CA-C-WI-002, dated 04/07/2011

Login Sample Receipt Checklist

Client: Van Winkle-Jacobs Engineering

Job Number: 310-114404-1
SDG Number: 17-3171

Login Number: 114404
List Number: 1
Creator: Patrick, Kathryn E

List Source: TestAmerica Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	