



August 14, 2019

SRC Energy

Dave Castro

5400 W 11th Street

Greely

CO 80634

Project Name - Warren McMillen 2 Investigation

Project Number - [none]

Attached are your analytical results for Warren McMillen 2 Investigation received by Origins Laboratory, Inc. August 13, 2019. This project is associated with Origins project number Y908205-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

SRC Energy

5400 W 11th Street

Greely CO 80634

Dave Castro

Project Number: [none]

Project: Warren McMillen 2 Investigation

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SESS1@8'	Y908205-01	Soil	August 13, 2019 13:35	08/13/2019 16:20

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: Warren McMillen 2 Investigation



www.originslaboratory.com

page 1 of 1

4908205

Project Manager: Dave Castro
Project Name: Warren McMillen 2 Investigation
Project Number:
Samples Collected By: dcastro@srcenergy.com

Client: SRC Energy, Inc.
Address: 5400 W. 11th St., Ste. C, Greeley, CO 80634
Telephone Number: 970-475-5245
Email Address: dcastro@srcenergy.com

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Al ₂ Summa Container #		
SESS1 @ 8'	8/13/19	13:35	2	X				X			X X X	1
												2
												3
												4
												5
												6
												7
												8
												9
												10
Relinquished By: Dan Castro	Date: 8/13/19	Time: 16:20		Received By: [Signature]				Date: 8/13/19	Time: 16:20	Turnaround Time: <input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard		
Relinquished By:	Date:	Time:		Received By:				Date:	Time:			

2.4 Date Results Needed

Origins Laboratory, Inc.

Jefe Pellegrini

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SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: Warren McMillan 2 Investigation

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: Y908205

Client: SRC Energy
Client Project ID: Warren McMillan 2

Checklist Completed by: JG

Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 8/13/19

Airbill #: NTA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: _____

Cooler Number/Temperature: 1 / 3.4 °C _____ / _____ °C _____ / _____ °C (Describe)

Thermometer ID: 7003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

Date/Time Reviewed 8/13/19

Origins Laboratory, Inc.

Jefe Pellegrini

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SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: Warren McMillen 2 Investigation

SESS1@8'

8/13/2019 1:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y908205-01 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B9H1317	KDK	08/13/2019	08/14/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	92.9 %	70-130	"	"	"
Surrogate: Toluene-d8	101 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	117 %	70-130	"	"	"

Diesel Range Organics (DRO/TEPH) by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9H1320	KDK	08/13/2019	08/13/2019	U
Surrogate: o-Terphenyl	75.2 %	50-150			"	"	"		

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Jen Pellegrini, Project Manager

SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: Warren McMillen 2 Investigation

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9H1317 - EPA 5030 (soil)										
Blank (B9H1317-BLK1)					Prepared: 08/13/2019 Analyzed: 08/13/2019					
Benzene	ND	0.00200	mg/kg							U
Toluene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		92.7	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.15		"	0.125		123	70-130			

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Dave Castro
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Project: Warren McMillen 2 Investigation

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9H1317 - EPA 5030 (soil)

LCS (B9H1317-BS1)

Prepared: 08/13/2019 Analyzed: 08/13/2019

Benzene	0.109	0.00200	mg/kg	0.100		109	70-130			
Toluene	0.106	0.00200	"	0.100		106	70-130			
Ethylbenzene	0.104	0.00200	"	0.100		104	70-130			
m,p-Xylene	0.206	0.00400	"	0.200		103	70-130			
o-Xylene	0.106	0.00200	"	0.100		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		89.4	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.15		"	0.125		119	70-130			

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Dave Castro
Project Number: [none]
Project: Warren McMillen 2 Investigation

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9H1317 - EPA 5030 (soil)

Matrix Spike (B9H1317-MS1)		Source: Y908201-21			Prepared: 08/13/2019 Analyzed: 08/13/2019					
Benzene	0.112	0.00200	mg/kg	0.100	ND	112	70-130			
Toluene	0.108	0.00200	"	0.100	0.00350	104	70-130			
Ethylbenzene	0.108	0.00200	"	0.100	0.00450	104	70-130			
m,p-Xylene	0.213	0.00400	"	0.200	0.0135	99.6	70-130			
o-Xylene	0.114	0.00200	"	0.100	0.00500	109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		89.1	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.15		"	0.125		117	70-130			

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Dave Castro
Project Number: [none]
Project: Warren McMillen 2 Investigation

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9H1317 - EPA 5030 (soil)										
Matrix Spike Dup (B9H1317-MSD1)					Source: Y908201-21					Prepared: 08/13/2019 Analyzed: 08/13/2019
Benzene	0.127	0.00200	mg/kg	0.100	ND	127	70-130	12.5	20	
Toluene	0.122	0.00200	"	0.100	0.00350	119	70-130	12.5	20	
Ethylbenzene	0.126	0.00200	"	0.100	0.00450	122	70-130	15.5	20	
m,p-Xylene	0.246	0.00400	"	0.200	0.0135	116	70-130	14.6	20	
o-Xylene	0.124	0.00200	"	0.100	0.00500	119	70-130	8.45	20	
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		88.7	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.15		"	0.125		120	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9H1320 - EPA 3580

Blank (B9H1320-BLK1)

Prepared: 08/13/2019 Analyzed: 08/13/2019

Diesel (C10-C28)	ND	25.0	mg/kg							U
Surrogate: o-Terphenyl	20		"	25.0		79.3	50-150			

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SRC Energy
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Dave Castro
Project Number: [none]
Project: Warren McMillen 2 Investigation

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9H1320 - EPA 3580

LCS (B9H1320-BS1)

Prepared: 08/13/2019 Analyzed: 08/13/2019

Diesel (C10-C28)	835	50.0	mg/kg	1000		83.5	70-130			
Surrogate: o-Terphenyl	41		"	50.0		82.1	50-150			

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Greely CO 80634

Dave Castro
Project Number: [none]
Project: Warren McMillen 2 Investigation

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9H1320 - EPA 3580

Matrix Spike (B9H1320-MS1)		Source: Y908203-01			Prepared: 08/13/2019 Analyzed: 08/13/2019					
Diesel (C10-C28)	954	50.0	mg/kg	1000	ND	95.4	70-130			
Surrogate: o-Terphenyl	38		"	50.0		76.6	50-150			

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Project Number: [none]
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Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9H1320 - EPA 3580

Matrix Spike Dup (B9H1320-MSD1)		Source: Y908203-01			Prepared: 08/13/2019 Analyzed: 08/13/2019					
Diesel (C10-C28)	908	50.0	mg/kg	1000	ND	90.8	70-130	4.89	35	
Surrogate: o-Terphenyl	37		"	50.0		73.1	50-150			

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SRC Energy

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Dave Castro

Project Number: [none]

Project: Warren McMillen 2 Investigation

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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