

August 01, 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. July 30, 2019. This project is associated with Origins project number Y907462-01.

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



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
SS1@4'	Y907462-01	Soil	July 30, 2019 13:05	07/30/2019 14:23

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

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page 1 of 1

ORIGINS
LABORATORY, INC

7907462

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

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

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summ #			Other
SS1 @ 4'	7/30/19	13:05	2	X					X			X X X	1
													2
													3
													4
													5
													6
													7
													8
													9
													10

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:
Dave Castro	7/30/19	14:23	[Signature]	7/30/19	14:23	Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input checked="" type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	

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

Date Results Needed

11/9

Origins Laboratory, Inc.

Jen Pellegrini

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SRC Energy
5400 W 11th Street
Greely CO 80634

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

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y907462

Client: SRC

Client Project ID: Warren McMillen 2

Checklist Completed by: SG

Shipped Via: HA

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 7/30/19

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 10.9 °C _____ / _____ °C _____ / _____ °C (Describe)

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?				
Is there ice present (document if blue ice is used)				
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)				
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)				
Were all samples received intact ⁽¹⁾ ?				
Was adequate sample volume provided ⁽¹⁾ ?				
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?				
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?				
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?				
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?				
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?				
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.				
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)				
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) JP

Date/Time Reviewed 7/31/19

Origins Laboratory, Inc.

Jen Pellegrini

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SRC Energy
5400 W 11th Street
Greely CO 80634

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

SS1@4'

7/30/2019 1:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907462-01 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	0.580	0.500	mg/kg	250	B9G3002	KDK	07/30/2019	07/30/2019
Toluene	0.810	0.500	"	"	"	KDK	"	"
Ethylbenzene	1.28	0.500	"	"	"	KDK	"	"
Xylenes, total	19.2	0.500	"	"	"	KDK	"	"
Gasoline Range Hydrocarbons	482	50.0	"	"	"	KDK	"	"

Surrogate: 1,2-Dichloroethane-d4	98.0 %	70-130	"	"	"
Surrogate: Toluene-d8	102 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	101 %	70-130	"	"	"

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

Diesel (C10-C28)	536	50.0	mg/kg	1	B9G3021	KDK	07/30/2019	07/30/2019
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Surrogate: o-Terphenyl	79.0 %	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 B9G3002 - EPA 5030 (soil)										
Blank (B9G3002-BLK1)					Prepared: 07/30/2019 Analyzed: 07/30/2019					
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	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.8	70-130			

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Jen Pellegrini, Project Manager

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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
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Batch B9G3002 - EPA 5030 (soil)

LCS (B9G3002-BS1)

Prepared: 07/30/2019 Analyzed: 07/30/2019

Benzene	0.0961	0.00200	mg/kg	0.100		96.1	70-130			
Toluene	0.0940	0.00200	"	0.100		94.0	70-130			
Ethylbenzene	0.0957	0.00200	"	0.100		95.7	70-130			
m,p-Xylene	0.196	0.00400	"	0.200		98.2	70-130			
o-Xylene	0.0975	0.00200	"	0.100		97.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		100	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.2	70-130			

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SRC Energy
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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 B9G3002 - EPA 5030 (soil)

Matrix Spike (B9G3002-MS1)		Source: Y907362-01			Prepared: 07/30/2019 Analyzed: 07/30/2019					
Benzene	0.101	0.00200	mg/kg	0.100	ND	101	70-130			
Toluene	0.0988	0.00200	"	0.100	ND	98.8	70-130			
Ethylbenzene	0.0998	0.00200	"	0.100	ND	99.8	70-130			
m,p-Xylene	0.205	0.00400	"	0.200	ND	102	70-130			
o-Xylene	0.103	0.00200	"	0.100	ND	103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		100	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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SRC Energy
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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 B9G3002 - EPA 5030 (soil)

Matrix Spike Dup (B9G3002-MSD1)		Source: Y907362-01			Prepared: 07/30/2019 Analyzed: 07/30/2019					
Benzene	0.0979	0.00200	mg/kg	0.100	ND	97.9	70-130	2.64	20	
Toluene	0.0974	0.00200	"	0.100	ND	97.4	70-130	1.45	20	
Ethylbenzene	0.0978	0.00200	"	0.100	ND	97.8	70-130	2.02	20	
m,p-Xylene	0.201	0.00400	"	0.200	ND	100	70-130	1.88	20	
o-Xylene	0.101	0.00200	"	0.100	ND	101	70-130	2.25	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		100	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.9	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 B9G3021 - EPA 3580

Blank (B9G3021-BLK1)

Prepared: 07/30/2019 Analyzed: 07/30/2019

Diesel (C10-C28)	ND	25.0	mg/kg							U
Surrogate: o-Terphenyl	19		"	25.0		77.6	50-150			

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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 B9G3021 - EPA 3580

LCS (B9G3021-BS1)

Prepared: 07/30/2019 Analyzed: 07/30/2019

Diesel (C10-C28)	1060	50.0	mg/kg	1000		106	70-130			
Surrogate: o-Terphenyl	51		"	50.0		103	50-150			

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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 B9G3021 - EPA 3580

Matrix Spike (B9G3021-MS1)		Source: Y907464-02			Prepared: 07/30/2019 Analyzed: 07/30/2019					
Diesel (C10-C28)	1040	50.0	mg/kg	1000	28.0	101	70-130			
Surrogate: o-Terphenyl	47		"	50.0		94.4	50-150			

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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 B9G3021 - EPA 3580

Matrix Spike Dup (B9G3021-MSD1)		Source: Y907464-02			Prepared: 07/30/2019 Analyzed: 07/30/2019					
Diesel (C10-C28)	1000	50.0	mg/kg	1000	28.0	97.4	70-130	3.93	35	
Surrogate: o-Terphenyl	47		"	50.0		94.3	50-150			

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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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