



December 28, 2018

SRC Energy

Dave Castro

5400 W 11th Street

Greely

CO 80634

Received 01/02/2019

Spill 2608530

Doc# 2528940

Project Name - SRC State 33-16D Spill Cleanup

Project Number - [none]

Attached are your analytical results for SRC State 33-16D Spill Cleanup received by Origins Laboratory, Inc. December 20, 2018. This project is associated with Origins project number Y812346-01.

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: SRC State 33-16D Spill Cleanup

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RSS @ 6"	Y812346-01	Soil	December 19, 2018 10:15	12/20/2018 15:37
NSS @ 6"	Y812346-02	Soil	December 19, 2018 10:19	12/20/2018 15:37
ESS @ 6"	Y812346-03	Soil	December 19, 2018 10:23	12/20/2018 15:37
SSS @ 6"	Y812346-04	Soil	December 19, 2018 10:28	12/20/2018 15:37
WSS @ 6"	Y812346-05	Soil	December 19, 2018 10:33	12/20/2018 15:37

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini, Project Manager

SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: SRC State 33-16D Spill Cleanup

www.originslaboratory.com

page 1 of 1

ORIGINS
LABORATORY, INC

7612346

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: SRC State 33-16D Spill Cleanup
Project Number:
Samples Collected By: dcastro@srcenergy.com

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	Air Summa #	Other			
RSS @ 6"	12/19/18	10:15	2	X					X			X X X	1	Sample Instructions <div>157EX DRO GRO EPA/MSAP</div>
NSS @ 6"	12/19/18	10:19	2	X					X			X X X	2	
ESS @ 6"	12/19/18	10:23	2	X					X			X X X	3	
SSS @ 6"	12/19/18	10:28	2	X					X			X X X	4	
WSS @ 6"	12/19/18	10:33	2	X					X			X X X	5	
													6	
													7	
													8	
													9	
													10	
Relinquished By: Dave Castro	Date: 12/20/18	Time: 15:37	Received By: [Signature]	Date: 12-20-18	Time: 15:37	Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> Standard								
Relinquished By:	Date:	Time:	Received By:	Date:	Time:									

Date Results Needed

Origins Laboratory, Inc.

Jen Pellegrini

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Jen Pellegrini, Project Manager

SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: SRC State 33-16D Spill Cleanup

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4812346

Client: SRC Energy

Client Project ID: SRC State 33-16D Spill Cleanup

Checklist Completed by: Dave Castro

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

Date/time completed: 12-20-12

Airbill #: NA

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

Cooler Number/Temperature: 1 / 45 °C 1 / _____ °C 1 / _____ °C 1 / _____ °C (Describe)

Thermometer ID: 1003

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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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) [Signature]

Date/Time Reviewed 12/21/12

Origins Laboratory, Inc.

[Signature]

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Jen Pellegrini, Project Manager

SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: SRC State 33-16D Spill Cleanup

RSS @ 6"

12/19/2018 10:15:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y812346-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8L2106	KDK	12/21/2018	12/21/2018	U
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Surrogate: o-Terphenyl	91.0 %	59-131			"	"	"		
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8L2105	JTD	12/21/2018	12/24/2018	U
Benzene	ND	0.002	"	"	"	JTD	"	"	U
Toluene	ND	0.002	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.002	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.002	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	111 %	70-130			"	"	"		
Surrogate: Toluene-d8	97.0 %	70-130			"	"	"		
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"		

Metals (Saturated Paste Prep)

Calcium	5.77	me/L	1	'[none]'		12/20/2018	12/26/2018
Magnesium	2.29	"	"	"		"	"
Sodium	4.78	"	"	"		"	"

pH in Soil by EPA 9045D

pH	8.55	pH Units	1	B8L2107	OLAB	12/21/2018	12/21/2018
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Origins Laboratory, Inc.



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SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: SRC State 33-16D Spill Cleanup

RSS @ 6"

12/19/2018 10:15:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y812346-01 (Soil)

SAR by 20B Saturated Paste

SAR	2.38			1	'[none]'		12/20/2018	12/26/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.125	0.00500	mmhos/cm	1	B8L2108	OLAB	12/21/2018	12/21/2018	
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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: SRC State 33-16D Spill Cleanup

NSS @ 6"

12/19/2018 10:19:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y812346-02 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8L2106	KDK	12/21/2018	12/21/2018	U
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Surrogate: o-Terphenyl	86.8 %	59-131			"	"	"		
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8L2105	JTD	12/21/2018	12/24/2018	U
Benzene	ND	0.002	"	"	"	JTD	"	"	U
Toluene	ND	0.002	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.002	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.002	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	109 %	70-130			"	"	"		
Surrogate: Toluene-d8	90.4 %	70-130			"	"	"		
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"		

Metals (Saturated Paste Prep)

Calcium	8.69	me/L	1	'[none]'		12/20/2018	12/26/2018
Magnesium	3.35	"	"	"		"	"
Sodium	6.72	"	"	"		"	"

pH in Soil by EPA 9045D

pH	8.29	pH Units	1	B8L2107	OLAB	12/21/2018	12/21/2018
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Origins Laboratory, Inc.



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SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: SRC State 33-16D Spill Cleanup

NSS @ 6"

12/19/2018 10:19:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y812346-02 (Soil)

SAR by 20B Saturated Paste

SAR	2.74			1	'[none]'		12/20/2018	12/26/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.154	0.00500	mmhos/cm	1	B8L2108	OLAB	12/21/2018	12/21/2018	
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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: SRC State 33-16D Spill Cleanup

ESS @ 6"

12/19/2018 10:23:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y812346-03 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8L2106	KDK	12/21/2018	12/21/2018	U
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Surrogate: o-Terphenyl	84.8 %	59-131			"	"	"		
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8L2105	JTD	12/21/2018	12/24/2018	U
Benzene	ND	0.002	"	"	"	JTD	"	"	U
Toluene	ND	0.002	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.002	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.002	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	112 %	70-130			"	"	"		
Surrogate: Toluene-d8	94.6 %	70-130			"	"	"		
Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"	"		

Metals (Saturated Paste Prep)

Calcium	6.71	me/L	1	'[none]'		12/20/2018	12/26/2018
Magnesium	2.70	"	"	"		"	"
Sodium	6.14	"	"	"		"	"

pH in Soil by EPA 9045D

pH	8.22	pH Units	1	B8L2107	OLAB	12/21/2018	12/21/2018
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Origins Laboratory, Inc.



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SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: SRC State 33-16D Spill Cleanup

ESS @ 6"

12/19/2018 10:23:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y812346-03 (Soil)

SAR by 20B Saturated Paste

SAR	2.83			1	'[none]'		12/20/2018	12/26/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.103	0.00500	mmhos/cm	1	B8L2108	OLAB	12/21/2018	12/21/2018	
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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: SRC State 33-16D Spill Cleanup

SSS @ 6"

12/19/2018 10:28:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y812346-04 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8L2106	KDK	12/21/2018	12/21/2018	U
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Surrogate: o-Terphenyl	92.4 %	59-131			"	"	"		
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8L2105	JTD	12/21/2018	12/24/2018	U
Benzene	ND	0.002	"	"	"	JTD	"	"	U
Toluene	ND	0.002	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.002	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.002	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	114 %	70-130			"	"	"		
Surrogate: Toluene-d8	96.4 %	70-130			"	"	"		
Surrogate: 4-Bromofluorobenzene	97.1 %	70-130			"	"	"		

Metals (Saturated Paste Prep)

Calcium	8.50	me/L	1		'[none]'		12/20/2018	12/26/2018	
Magnesium	3.39	"	"		"		"	"	
Sodium	7.08	"	"		"		"	"	

pH in Soil by EPA 9045D

pH	8.00	pH Units	1		B8L2107	OLAB	12/21/2018	12/21/2018	
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SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: SRC State 33-16D Spill Cleanup

SSS @ 6"

12/19/2018 10:28:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y812346-04 (Soil)

SAR by 20B Saturated Paste

SAR	2.90			1	'[none]'		12/20/2018	12/26/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.166	0.00500	mmhos/cm	1	B8L2108	OLAB	12/21/2018	12/21/2018	
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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: SRC State 33-16D Spill Cleanup

WSS @ 6"

12/19/2018 10:33:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y812346-05 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8L2106	KDK	12/21/2018	12/21/2018	U
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Surrogate: o-Terphenyl	83.8 %	59-131			"	"	"		
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8L2105	JTD	12/21/2018	12/24/2018	U
Benzene	ND	0.002	"	"	"	JTD	"	"	U
Toluene	ND	0.002	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.002	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.002	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	113 %	70-130			"	"	"		
Surrogate: Toluene-d8	99.4 %	70-130			"	"	"		
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"		

Metals (Saturated Paste Prep)

Calcium	9.40	me/L	1	"[none]"		12/20/2018	12/26/2018
Magnesium	3.71	"	"	"		"	"
Sodium	7.31	"	"	"		"	"

pH in Soil by EPA 9045D

pH	8.00	pH Units	1	B8L2107	OLAB	12/21/2018	12/21/2018
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Origins Laboratory, Inc.



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SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: SRC State 33-16D Spill Cleanup

WSS @ 6"

12/19/2018 10:33:00AM

Analyte	Result	Reporting	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.
Y812346-05 (Soil)

SAR by 20B Saturated Paste

SAR	2.86		1		'[none]'		12/20/2018	12/26/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.181	0.00500	mmhos/cm	1	B8L2108	OLAB	12/21/2018	12/21/2018	
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Jen Pellegrini, Project Manager

SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: SRC State 33-16D Spill Cleanup

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8L2105 - EPA 5030 (soil)										
Blank (B8L2105-BLK1)					Prepared: 12/21/2018 Analyzed: 12/22/2018					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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: SRC State 33-16D Spill Cleanup

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8L2105 - EPA 5030 (soil)										
Blank (B8L2105-BLK2)					Prepared: 12/21/2018 Analyzed: 12/22/2018					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.5	70-130			

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Jen Pellegrini, Project Manager

SRC Energy
5400 W 11th Street
Greely CO 80634

Dave Castro
Project Number: [none]
Project: SRC State 33-16D Spill Cleanup

Volatile Organic Compounds by GC/MS SW846 8260C - 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 B8L2105 - EPA 5030 (soil)

LCS (B8L2105-BS1)

Prepared: 12/21/2018 Analyzed: 12/21/2018

Benzene	0.100	0.002	mg/kg	0.100	100	77.1-124
Toluene	0.105	0.002	"	0.100	105	74.5-128
Ethylbenzene	0.108	0.002	"	0.100	108	66.4-127
m,p-Xylene	0.207	0.004	"	0.200	103	76.6-124
o-Xylene	0.115	0.002	"	0.100	115	76.6-124
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125	98.2	70-130
Surrogate: Toluene-d8	0.13		"	0.125	102	70-130
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	99.4	70-130

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Dave Castro
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Volatile Organic Compounds by GC/MS SW846 8260C - 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 B8L2105 - EPA 5030 (soil)

LCS (B8L2105-BS2)

Prepared: 12/21/2018 Analyzed: 12/22/2018

Benzene	0.111	0.002	mg/kg	0.100	111	77.1-124
Toluene	0.107	0.002	"	0.100	107	74.5-128
Ethylbenzene	0.114	0.002	"	0.100	114	66.4-127
m,p-Xylene	0.214	0.004	"	0.200	107	76.6-124
o-Xylene	0.117	0.002	"	0.100	117	76.6-124
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125	96.8	70-130
Surrogate: Toluene-d8	0.12		"	0.125	97.7	70-130
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	102	70-130

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Dave Castro
Project Number: [none]
Project: SRC State 33-16D Spill Cleanup

Volatile Organic Compounds by GC/MS SW846 8260C - 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 B8L2105 - EPA 5030 (soil)

Matrix Spike (B8L2105-MS1)		Source: Y812287-01			Prepared: 12/21/2018 Analyzed: 12/22/2018					
Benzene	0.094	0.002	mg/kg	0.100	ND	94.0	71.8-126			
Toluene	0.094	0.002	"	0.100	ND	94.1	65.1-130			
Ethylbenzene	0.100	0.002	"	0.100	ND	100	62.2-130			
m,p-Xylene	0.189	0.004	"	0.200	0.001	93.8	46.5-137			
o-Xylene	0.101	0.002	"	0.100	ND	101	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		105	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - 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 B8L2105 - EPA 5030 (soil)

Matrix Spike (B8L2105-MS2)		Source: Y812287-02			Prepared: 12/21/2018 Analyzed: 12/22/2018					
Benzene	0.079	0.002	mg/kg	0.100	ND	78.5	71.8-126			
Toluene	0.075	0.002	"	0.100	ND	75.3	65.1-130			
Ethylbenzene	0.064	0.002	"	0.100	ND	63.9	62.2-130			
m,p-Xylene	0.119	0.004	"	0.200	0.001	58.9	46.5-137			
o-Xylene	0.065	0.002	"	0.100	ND	65.1	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.15		"	0.125		123	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		93.4	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - 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 B8L2105 - EPA 5030 (soil)

Matrix Spike Dup (B8L2105-MSD1)		Source: Y812287-01			Prepared: 12/21/2018 Analyzed: 12/22/2018					
Benzene	0.079	0.002	mg/kg	0.100	ND	78.8	71.8-126	17.6	11.3	QR-02
Toluene	0.078	0.002	"	0.100	ND	78.1	65.1-130	18.6	15.4	QR-02
Ethylbenzene	0.082	0.002	"	0.100	ND	81.8	62.2-130	20.3	19.6	QR-02
m,p-Xylene	0.152	0.004	"	0.200	0.001	75.5	46.5-137	21.4	19.2	QR-02
o-Xylene	0.084	0.002	"	0.100	ND	84.3	54.2-134	17.6	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		106	70-130			

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Dave Castro
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Project: SRC State 33-16D Spill Cleanup

Volatile Organic Compounds by GC/MS SW846 8260C - 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 B8L2105 - EPA 5030 (soil)

Matrix Spike Dup (B8L2105-MSD2)		Source: Y812287-02			Prepared: 12/21/2018 Analyzed: 12/22/2018					
Benzene	0.092	0.002	mg/kg	0.100	ND	92.5	71.8-126	16.3	11.3	QR-02
Toluene	0.090	0.002	"	0.100	ND	90.0	65.1-130	17.8	15.4	QR-02
Ethylbenzene	0.090	0.002	"	0.100	ND	89.8	62.2-130	33.7	19.6	QR-02
m,p-Xylene	0.167	0.004	"	0.200	0.001	83.0	46.5-137	33.8	19.2	QR-02
o-Xylene	0.093	0.002	"	0.100	ND	93.0	54.2-134	35.3	17.9	QR-02
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

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Project: SRC State 33-16D Spill Cleanup

Volatile Organic Compounds by GC/MS SW846 8260C - 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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Extractable Petroleum Hydrocarbons by 8015C - 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 B8L2106 - EPA 3580

Blank (B8L2106-BLK1)

Prepared: 12/21/2018 Analyzed: 12/21/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Surrogate: o-Terphenyl	44		"	50.0		88.0	59-131			

LCS (B8L2106-BS1)

Prepared: 12/21/2018 Analyzed: 12/21/2018

Diesel (C10-C28)	1070	50.0	mg/kg	1000		107	64-121			
Surrogate: o-Terphenyl	52		"	50.0		104	59-131			

Matrix Spike (B8L2106-MS1)

Source: Y812312-02

Prepared: 12/21/2018 Analyzed: 12/21/2018

Diesel (C10-C28)	998	50.0	mg/kg	1000	ND	99.8	53-125			
Surrogate: o-Terphenyl	47		"	50.0		93.1	59-131			

Matrix Spike Dup (B8L2106-MSD1)

Source: Y812312-02

Prepared: 12/21/2018 Analyzed: 12/21/2018

Diesel (C10-C28)	1040	50.0	mg/kg	1000	ND	104	53-125	3.99	20	
Surrogate: o-Terphenyl	48		"	50.0		97.0	59-131			

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Project Number: [none]
Project: SRC State 33-16D Spill Cleanup

Classical Chemistry Parameters - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8L2107 - NO PREP										
Duplicate (B8L2107-DUP1)		Source: Y812301-01			Prepared: 12/21/2018 Analyzed: 12/21/2018					
pH	7.41		pH Units		8.13			9.27	25	
Batch B8L2108 - NO PREP										
Blank (B8L2108-BLK1)		Prepared: 12/21/2018 Analyzed: 12/21/2018								
Specific Conductance (EC)	0.00350	0.00500	mmhos/cm							
Duplicate (B8L2108-DUP1)		Source: Y812301-01			Prepared: 12/21/2018 Analyzed: 12/21/2018					
Specific Conductance (EC)	0.0947	0.00500	mmhos/cm		0.0836			12.5	25	

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SRC Energy

5400 W 11th Street

Greely CO 80634

Dave Castro

Project Number: [none]

Project: SRC State 33-16D Spill Cleanup

Notes and Definitions

U Sample is Non-Detect.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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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