



March 07, 2018

**SRC Energy**

**Dave Castro**

**5400 W 11th Street**

**Greely**

**CO 80634**

**Project Name - Ikenouye TB West Pit GW**

**Project Number - [none]**

Attached are your analytical results for Ikenouye TB West Pit GW received by Origins Laboratory, Inc. March 06, 2018. This project is associated with Origins project number Y803106-01.

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: Ikenouye TB West Pit GW

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WPGW-1	Y803106-01	Water	March 6, 2018 11:41	03/06/2018 16:29

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: Ikenouye TB West Pit GW

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page 1 of 1

Y903106

**ORIGINS**  
LABORATORY, INC

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: Ikenouye TB West Pit GW  
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 <sub>3</sub>	Other	Groundwater	Soil	Air Summation Container #			Other
WPGW-1	3/6/18	11:41	6	X				X				1	
												2	
												3	
												4	
												5	
												6	
												7	
												8	
												9	
												10	

Relinquished By: Dave Castro Date: 3/6/18 Time: 16:29

Relinquished By: Date: Time:

Received By: Date: 3/6/18 Time: 16:29

Received By: Date: Time:

Turnaround Time: ☒ 24 Hr ☐ 48 Hr ☐ 72 Hr

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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: Ikenouye TB West Pit GW

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: Y803106

Client: SRC Energy

Client Project ID: Ikenouye TB West Pit GW

Checklist Completed by: JG

Shipped Via: HD

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

Date/time completed: 3/6/18

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 3.1 °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 <sup>(1)</sup> ?	<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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (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 <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup>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)

3-6-18  
Date/Time Reviewed

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Jen Pellegrini, Project Manager

SRC Energy

5400 W 11th Street

Greely CO 80634

Dave Castro

Project Number: [none]

Project: Ikenouye TB West Pit GW

## WPGW-1

3/6/2018 11:41:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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### Origins Laboratory, Inc. Y803106-01 (Water)

#### BTEX by EPA 8260C

Benzene	254	50.0	ug/L	50	B8C0601	03/06/2018	03/07/2018
Toluene	1360	50.0	"	"	"	"	"
Ethylbenzene	70.5	50.0	"	"	"	"	"
Xylenes, total	1820	50.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	106 %	84-121			"	"	"
Surrogate: Toluene-d8	97.4 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	84-114			"	"	"

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Jen Pellegrini, Project Manager

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Greely CO 80634

Dave Castro  
Project Number: [none]  
Project: Ikenouye TB West Pit GW

**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 B8C0601 - EPA 5030B (Water)**

**Blank (B8C0601-BLK1)**

Prepared: 03/06/2018 Analyzed: 03/06/2018

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5	99.5	84-121				
Surrogate: Toluene-d8	63		"	62.5	100	85-115				
Surrogate: 4-Bromofluorobenzene	60		"	62.5	95.3	84-114				

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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 B8C0601 - EPA 5030B (Water)**

**LCS (B8C0601-BS1)**

Prepared: 03/06/2018 Analyzed: 03/06/2018

Benzene	49.7	1.00	ug/L	50.0		99.5	73.3-129
Toluene	51.0	1.00	"	50.0		102	76.2-123
Ethylbenzene	44.1	1.00	"	50.0		88.2	73.6-130
m,p-Xylene	88.4	2.00	"	100		88.4	76.1-126
o-Xylene	42.5	1.00	"	50.0		84.9	76.6-124
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		92.9	84-121
Surrogate: Toluene-d8	63		"	62.5		101	85-115
Surrogate: 4-Bromofluorobenzene	59		"	62.5		94.9	84-114

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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 B8C0601 - EPA 5030B (Water)**

Matrix Spike (B8C0601-MS1)		Source: Y803010-01			Prepared: 03/06/2018 Analyzed: 03/06/2018					
Benzene	53.9	1.00	ug/L	50.0	ND	108	74-130			
Toluene	56.1	1.00	"	50.0	ND	112	73-131			
Ethylbenzene	49.6	1.00	"	50.0	ND	99.2	76-132			
m,p-Xylene	98.6	2.00	"	100	ND	98.6	69-139			
o-Xylene	46.4	1.00	"	50.0	ND	92.8	74-131			
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		95.0	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		93.9	84-114			

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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 B8C0601 - EPA 5030B (Water)**

Matrix Spike Dup (B8C0601-MSD1)		Source: Y803010-01			Prepared: 03/06/2018 Analyzed: 03/06/2018					
Benzene	53.2	1.00	ug/L	50.0	ND	106	74-130	1.19	20	
Toluene	55.4	1.00	"	50.0	ND	111	73-131	1.17	20	
Ethylbenzene	49.0	1.00	"	50.0	ND	97.9	76-132	1.32	20	
m,p-Xylene	96.9	2.00	"	100	ND	96.9	69-139	1.78	20	
o-Xylene	45.9	1.00	"	50.0	ND	91.8	74-131	1.13	20	
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		94.6	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.2	84-114			

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### 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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