



April 06, 2018

Eagle Environmental Consulting, Inc.

Dan Coloccia

4101 Inca Street

Denver

CO 80211

Project Name - SRC - Ikenouye West Pit

Project Number - [none]

Attached are your analytical results for SRC - Ikenouye West Pit received by Origins Laboratory, Inc. March 29, 2018. This project is associated with Origins project number Y803517-01.

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

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: SRC - Ikenouye West Pit

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1 (2-3')	Y803517-01	Soil	March 29, 2018 9:20	03/29/2018 16:35
MW-2 (2-3')	Y803517-02	Soil	March 29, 2018 11:30	03/29/2018 16:35
MW-3 (2-3')	Y803517-03	Soil	March 29, 2018 9:55	03/29/2018 16:35
MW-4 (2-3')	Y803517-04	Soil	March 29, 2018 10:20	03/29/2018 16:35
MW-5 (2-3')	Y803517-05	Soil	March 29, 2018 9:40	03/29/2018 16:35
MW-6 (4-5')	Y803517-06	Soil	March 29, 2018 9:10	03/29/2018 16:35
MW-7 (4-5')	Y803517-07	Soil	March 29, 2018 9:00	03/29/2018 16:35
MW-8 (2-3')	Y803517-08	Soil	March 29, 2018 8:45	03/29/2018 16:35

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Dan Coloccia
Project Number: [none]
Project: SRC - Ikenouye West Pit

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y803517

Client: Eagle

Client Project ID: SRC - Ikenouye West Pit

Checklist Completed by: JG

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

Date/time completed: 3/30/18

Airbill #: D/A

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

Cooler Number/Temperature: 1 / 3.2 °C _____ / _____ °C _____ / _____ °C (Describe)

Thermometer ID: TC03

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 checked="" 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) JG

Date/Time Reviewed 4/2/18

Origins Laboratory, Inc.

Jefe Pellegrini

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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Dan Coloccia
Project Number: [none]
Project: SRC - Ikenouye West Pit

MW-1 (2-3')

3/29/2018 9:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y803517-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8D0307	04/03/2018	04/04/2018	U
Surrogate: o-Terphenyl	103 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8D0306	04/03/2018	04/05/2018	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	107 %	70-130			"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"	"	

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Dan Coloccia
Project Number: [none]
Project: SRC - Ikenouye West Pit

MW-2 (2-3')

3/29/2018 11:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y803517-02 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8D0307	04/03/2018	04/04/2018	U
Surrogate: o-Terphenyl	96.5 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8D0306	04/03/2018	04/03/2018	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	98.1 %	70-130			"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.7 %	70-130			"	"	"	

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Dan Coloccia
Project Number: [none]
Project: SRC - Ikenouye West Pit

MW-3 (2-3')

3/29/2018 9:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y803517-03 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8D0307	04/03/2018	04/04/2018	U
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Surrogate: o-Terphenyl	101 %	59-131			"	"	"	
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8D0306	04/03/2018	04/05/2018	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	106 %	70-130			"	"	"	
Surrogate: Toluene-d8	102 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"	

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Dan Coloccia
Project Number: [none]
Project: SRC - Ikenouye West Pit

MW-4 (2-3')

3/29/2018 10:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y803517-04 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8D0307	04/03/2018	04/04/2018	U
Surrogate: o-Terphenyl	97.3 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8D0306	04/03/2018	04/05/2018	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	108 %	70-130			"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"	

Origins Laboratory, Inc.



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4101 Inca Street
Denver CO 80211

Dan Coloccia
Project Number: [none]
Project: SRC - Ikenouye West Pit

MW-5 (2-3')

3/29/2018 9:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y803517-05 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8D0307	04/03/2018	04/04/2018	U
Surrogate: o-Terphenyl	96.6 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8D0306	04/03/2018	04/05/2018	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	113 %	70-130			"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"	

Origins Laboratory, Inc.



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4101 Inca Street
Denver CO 80211

Dan Coloccia
Project Number: [none]
Project: SRC - Ikenouye West Pit

MW-6 (4-5')

3/29/2018 9:10:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y803517-06 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8D0307	04/03/2018	04/04/2018	U
Surrogate: o-Terphenyl	87.1 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8D0306	04/03/2018	04/05/2018	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	109 %	70-130			"	"	"	
Surrogate: Toluene-d8	99.3 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.5 %	70-130			"	"	"	

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Dan Coloccia
Project Number: [none]
Project: SRC - Ikenouye West Pit

MW-7 (4-5')

3/29/2018 9:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y803517-07 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8D0307	04/03/2018	04/04/2018	U
Surrogate: o-Terphenyl	96.3 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8D0306	04/03/2018	04/05/2018	U
Benzene	0.003	0.002	"	"	"	"	"	
Toluene	0.002	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	

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4101 Inca Street
Denver CO 80211

Dan Coloccia
Project Number: [none]
Project: SRC - Ikenouye West Pit

MW-8 (2-3')

3/29/2018 8:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y803517-08 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8D0307	04/03/2018	04/04/2018	U
Surrogate: o-Terphenyl	97.9 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8D0306	04/03/2018	04/05/2018	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	0.002	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"	"	

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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: SRC - Ikenouye West Pit

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 B8D0306 - EPA 5030 (soil)

Blank (B8D0306-BLK1)

Prepared: 04/03/2018 Analyzed: 04/03/2018

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	69		ug/kg	62.5		110	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: SRC - Ikenouye West Pit

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 B8D0306 - EPA 5030 (soil)

Blank (B8D0306-BLK2)

Prepared: 04/03/2018 Analyzed: 04/03/2018

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	73		ug/kg	62.5		116	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

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4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: SRC - Ikenouye West Pit

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 B8D0306 - EPA 5030 (soil)

LCS (B8D0306-BS1)

Prepared: 04/03/2018 Analyzed: 04/03/2018

Benzene	0.099	0.002	mg/kg	0.100		99.2	77.1-124			
Toluene	0.100	0.002	"	0.100		100	74.5-128			
Ethylbenzene	0.104	0.002	"	0.100		104	66.4-127			
m,p-Xylene	0.224	0.004	"	0.200		112	76.6-124			
o-Xylene	0.110	0.002	"	0.100		110	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	73		ug/kg	62.5		117	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		105	70-130			

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Jen Pellegrini For Noelle Doyle Mathis, President

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: SRC - Ikenouye West Pit

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 B8D0306 - EPA 5030 (soil)

LCS (B8D0306-BS2)

Prepared: 04/03/2018 Analyzed: 04/03/2018

Benzene	0.093	0.002	mg/kg	0.100		93.0	77.1-124			
Toluene	0.094	0.002	"	0.100		93.9	74.5-128			
Ethylbenzene	0.096	0.002	"	0.100		96.2	66.4-127			
m,p-Xylene	0.207	0.004	"	0.200		103	76.6-124			
o-Xylene	0.103	0.002	"	0.100		103	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	73		ug/kg	62.5		116	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	70-130			

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Jen Pellegrini For Noelle Doyle Mathis, President

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4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: SRC - Ikenouye West Pit

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 B8D0306 - EPA 5030 (soil)

Matrix Spike (B8D0306-MS1)		Source: Y804044-02			Prepared: 04/03/2018 Analyzed: 04/03/2018					
Benzene	0.085	0.002	mg/kg	0.100	0.002	83.9	71.8-126			
Toluene	0.084	0.002	"	0.100	0.006	77.6	65.1-130			
Ethylbenzene	0.080	0.002	"	0.100	ND	80.4	62.2-130			
m,p-Xylene	0.105	0.004	"	0.200	0.048	28.4	46.5-137			QM-07
o-Xylene	0.106	0.002	"	0.100	0.080	25.5	54.2-134			QM-07
Surrogate: 1,2-Dichloroethane-d4	70		ug/kg	62.5		112	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		109	70-130			

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: SRC - Ikenouye West Pit

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 B8D0306 - EPA 5030 (soil)

Matrix Spike (B8D0306-MS2)		Source: Y803517-02			Prepared: 04/03/2018 Analyzed: 04/03/2018					
Benzene	0.101	0.002	mg/kg	0.100	ND	101	71.8-126			
Toluene	0.102	0.002	"	0.100	0.0009	101	65.1-130			
Ethylbenzene	0.105	0.002	"	0.100	ND	105	62.2-130			
m,p-Xylene	0.220	0.004	"	0.200	0.001	109	46.5-137			
o-Xylene	0.109	0.002	"	0.100	0.0003	109	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	60		ug/kg	62.5		96.5	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		102	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 B8D0306 - EPA 5030 (soil)

Matrix Spike Dup (B8D0306-MSD1)		Source: Y804044-02			Prepared: 04/03/2018 Analyzed: 04/03/2018					
Benzene	0.097	0.002	mg/kg	0.100	0.002	95.0	71.8-126	12.3	11.3	QR-02
Toluene	0.098	0.002	"	0.100	0.006	91.5	65.1-130	15.3	15.4	
Ethylbenzene	0.096	0.002	"	0.100	ND	96.2	62.2-130	17.9	19.6	
m,p-Xylene	0.147	0.004	"	0.200	0.048	49.4	46.5-137	33.3	19.2	QR-03
o-Xylene	0.120	0.002	"	0.100	0.080	39.7	54.2-134	12.6	17.9	QM-07
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		109	70-130			

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Dan Coloccia

Project Number: [none]

Project: SRC - Ikenouye West Pit

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 B8D0306 - EPA 5030 (soil)

Matrix Spike Dup (B8D0306-MSD2)		Source: Y803517-02			Prepared: 04/03/2018 Analyzed: 04/03/2018					
Benzene	0.102	0.002	mg/kg	0.100	ND	102	71.8-126	1.15	11.3	
Toluene	0.102	0.002	"	0.100	0.0009	101	65.1-130	0.314	15.4	
Ethylbenzene	0.104	0.002	"	0.100	ND	104	62.2-130	0.325	19.6	
m,p-Xylene	0.220	0.004	"	0.200	0.001	109	46.5-137	0.173	19.2	
o-Xylene	0.109	0.002	"	0.100	0.0003	109	54.2-134	0.146	17.9	
Surrogate: 1,2-Dichloroethane-d4	60		ug/kg	62.5		95.4	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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Dan Coloccia
Project Number: [none]
Project: SRC - Ikenouye West Pit

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 B8D0307 - EPA 3550B

Blank (B8D0307-BLK1)

Prepared: 04/03/2018 Analyzed: 04/03/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
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Surrogate: o-Terphenyl

53

"

50.0

105

59-131

Blank (B8D0307-BLK2)

Prepared: 04/03/2018 Analyzed: 04/04/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
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Surrogate: o-Terphenyl

43

"

50.0

86.2

59-131

LCS (B8D0307-BS1)

Prepared: 04/03/2018 Analyzed: 04/03/2018

Diesel (C10-C28)	908	50.0	mg/kg	1000		90.8	64-121			
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Surrogate: o-Terphenyl

48

"

50.0

95.1

59-131

LCS (B8D0307-BS2)

Prepared: 04/03/2018 Analyzed: 04/04/2018

Diesel (C10-C28)	1040	50.0	mg/kg	1000		104	64-121			
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Surrogate: o-Terphenyl

53

"

50.0

106

59-131

Matrix Spike (B8D0307-MS1)

Source: Y804044-02

Prepared: 04/03/2018 Analyzed: 04/03/2018

Diesel (C10-C28)	1040	50.0	mg/kg	1000	22.9	102	53-125			
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Surrogate: o-Terphenyl

54

"

50.0

108

59-131

Matrix Spike (B8D0307-MS2)

Source: Y803517-02

Prepared: 04/03/2018 Analyzed: 04/04/2018

Diesel (C10-C28)	928	50.0	mg/kg	1000	ND	92.8	53-125			
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Surrogate: o-Terphenyl

52

"

50.0

105

59-131

Origins Laboratory, Inc.



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Denver CO 80211

Dan Coloccia
Project Number: [none]
Project: SRC - Ikenouye West Pit

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 B8D0307 - EPA 3550B

Matrix Spike Dup (B8D0307-MSD1)		Source: Y804044-02			Prepared: 04/03/2018 Analyzed: 04/03/2018					
Diesel (C10-C28)	1040	50.0	mg/kg	1000	22.9	102	53-125	0.0953	20	
Surrogate: o-Terphenyl	51		"	50.0		102	59-131			
Matrix Spike Dup (B8D0307-MSD2)		Source: Y803517-02			Prepared: 04/03/2018 Analyzed: 04/04/2018					
Diesel (C10-C28)	926	50.0	mg/kg	1000	ND	92.6	53-125	0.198	20	
Surrogate: o-Terphenyl	52		"	50.0		105	59-131			

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Dan Coloccia

Project Number: [none]

Project: SRC - Ikenouye West Pit

Notes and Definitions

U Sample is Non-Detect.

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.

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.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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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