

December 30, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

Project Name - KMG - Sawdey 5-30

Project Number - 90434318

Attached are your analytical results for KMG - Sawdey 5-30 received by Origins Laboratory, Inc. December 06, 2021. This project is associated with Origins project number Y112157-01.

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



Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-B01@6'	Y112157-01	Soil	December 6, 2021 9:39	12/06/2021 17:18
WH-BG01@3'	Y112157-02	Soil	December 6, 2021 10:06	12/06/2021 17:18
WH-BG01@6'	Y112157-03	Soil	December 6, 2021 10:09	12/06/2021 17:18
WH-BG02@3'	Y112157-04	Soil	December 6, 2021 10:12	12/06/2021 17:18
WH-BG02@6'	Y112157-05	Soil	December 6, 2021 10:15	12/06/2021 17:18
WH-BG03@3'	Y112157-06	Soil	December 6, 2021 10:18	12/06/2021 17:18
WH-BG03@6'	Y112157-07	Soil	December 6, 2021 10:21	12/06/2021 17:18
WH-BG04@3'	Y112157-08	Soil	December 6, 2021 10:24	12/06/2021 17:18
WH-BG04@6'	Y112157-09	Soil	December 6, 2021 10:27	12/06/2021 17:18
FL-B01@3'	Y112157-10	Soil	December 6, 2021 10:30	12/06/2021 17:18
FL-B02@3'	Y112157-11	Soil	December 6, 2021 11:19	12/06/2021 17:18

Origins Laboratory, Inc.



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Tasman Geosciences
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Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

www.originslaboratory.com

1118157

page 1 of 2

ORIGINS
 LABORATORY, INC

Client: Oxy/Tasman
 Address: 6855 W 119th Ave
 Telephone Number: 303-487-1228
 Email Address: m.jahn@tgs.com

Project Manager: Mike Jahn
 Project Name: Sawdey 5-30
 Project Number: 90434318
 Samples Collected By: Brandon V.

Fax: 303.265.9645

Phone: 303.433.1322

Denver, CO 80211

1725 Elk Place

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis						Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	As Sample #	Other	As	Fe	Mn	Pb	Se		Ag
WH-560106'	12-6-21	0959	1	X					X			X	X	X	X	X	X	* Saturated paste
WH-560103'		1006										X	X	X	X	X	X	* Hot water soil
WH-560106'		1009										X	X	X	X	X	X	
WH-560103'		1012										X	X	X	X	X	X	915 muds added to
WH-560106'		1015										X	X	X	X	X	X	all 130 samples per
WH-560103'		1019										X	X	X	X	X	X	+ TMBs added to 661016
WH-560106'		1021										X	X	X	X	X	X	66103' + 60203' per
WH-560103'		1021										X	X	X	X	X	X	Use email for Eric
WH-560106'		1027										X	X	X	X	X	X	on 12/8/21
WH-FL-560103'		1030										X	X	X	X	X	X	
Relinquished By: Brandon V.	Date: 12-6-21	Time: 1718										Received By: AH	Date: 12/11/21	Time: 1718				Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>
Relinquished By:	Date:	Time:										Received By:	Date:	Time:				

Date Results Needed

Origins Laboratory, Inc.

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Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y112157

Client: Tasman
 Client Project ID: Sawdey 5-30

Checklist Completed by: JG
 Date/time completed: 12/6/21

Shipped Via: HD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A

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

Cooler Number/Temperature: 127 °C 1 °C 1 °C 1 °C

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⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" 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"/>		
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"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<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"/>	
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 base narrative.

Reviewed by (Project Manager) _____

12/6/21
 Date/Time Reviewed

Origins Laboratory, Inc.



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 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-B01@6'
12/6/2021 9:39:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-01 (Soil)

Boron (DTPA Sorbitol)

Boron	0.263		0.202	mg/L	1	B1L0712	12/07/2021	12/08/2021	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B1L0620	12/06/2021	12/07/2021	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	60.8 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	0.00294		0.00200	mg/kg	1	B1L0619	12/06/2021	12/06/2021	
Naphthalene	ND		0.00380	"	"	"	"	"	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	12/07/2021	U

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WH-B01@6'
12/6/2021 9:39:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	97.1 %		70-130			B1L06 19	12/06/2021	12/06/2021	
Surrogate: Toluene-d8	98.2 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.4 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	0.719		0.499	meq/L	10	[CALC]	12/07/2021	12/08/2021	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	4.52		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	9.11			pH Units	1	B1L0715	12/07/2021	12/08/2021	
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SAR by 20B Saturated Paste

SAR	5.27			SAR	1	B1L0710	12/07/2021	12/08/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.836		0.00500	mmhos/cm	1	B1L0713	12/07/2021	12/08/2021	
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Mike Jahn
 Project Number: 90434318
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WH-BG01@3'

12/6/2021 10:06:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-02 (Soil)

Boron (DTPA Sorbitol)

Boron	0.645		0.201	mg/L	1	B1L0712	12/07/2021	12/08/2021	
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Metals by Saturated Paste by EPA 6010

Calcium	1.11		0.499	meq/L	10	[CALC]	12/07/2021	12/08/2021	
Magnesium	1.36		0.823	"	"	"	"	"	
Sodium	0.753		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.26			pH Units	1	B1L0715	12/07/2021	12/08/2021	
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SAR by 20B Saturated Paste

SAR	0.677			SAR	1	B1L0710	12/07/2021	12/08/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.312		0.00500	mmhos/cm	1	B1L0713	12/07/2021	12/08/2021	
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Total Metals by 6020B

Arsenic	2.44	0.0855	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Barium	122	0.042	0.25	"	"	"	"	"	
Cadmium	0.0943	0.0259	0.25	"	"	"	"	"	J
Copper	6.39	0.0806	0.25	"	"	"	"	"	

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WH-BG01@3'

12/6/2021 10:06:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y112157-02 (Soil)

Total Metals by 6020B

Lead	7.15	0.031	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Nickel	7.51	0.0633	0.25	"	"	"	"	"	
Selenium	0.45	0.103	0.25	"	"	"	"	"	
Silver	0.0433	0.0067	0.25	"	"	"	"	"	J
Zinc	28.2	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L590916	12/06/2021	12/20/2021	
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WH-BG01@6'
12/6/2021 10:09:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-03 (Soil)

Boron (DTPA Sorbitol)

Boron	0.445		0.202	mg/L	1	B1L0712	12/07/2021	12/08/2021	
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Metals by Saturated Paste by EPA 6010

Calcium	0.694		0.499	meq/L	10	[CALC]	12/07/2021	12/08/2021	
Magnesium	0.955		0.823	"	"	"	"	"	
Sodium	2.00		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.56			pH Units	1	B1L0715	12/07/2021	12/08/2021	
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SAR by 20B Saturated Paste

SAR	2.20			SAR	1	B1L0710	12/07/2021	12/08/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.419		0.00500	mmhos/cm	1	B1L0713	12/07/2021	12/08/2021	
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Total Metals by 6020B

Arsenic	1.83	0.0855	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Barium	104	0.042	0.25	"	"	"	"	"	
Cadmium	0.0379	0.0259	0.25	"	"	"	"	"	J
Copper	3.36	0.0806	0.25	"	"	"	"	"	

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Mike Jahn
Project Number: 90434318
Project: KMG - Sawdey 5-30

WH-BG01@6'

12/6/2021 10:09:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y112157-03 (Soil)

Total Metals by 6020B

Lead	5.24	0.031	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Nickel	5.52	0.0633	0.25	"	"	"	"	"	
Selenium	0.253	0.103	0.25	"	"	"	"	"	
Silver	0.0149	0.0067	0.25	"	"	"	"	"	J
Zinc	20.6	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.252	0.517	mg/Kg	1	L590916	12/06/2021	12/20/2021	
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Mike Jahn
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WH-BG02@3'

12/6/2021 10:12:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-04 (Soil)

Boron (DTPA Sorbitol)

Boron	0.780		0.200	mg/L	1	B1L0712	12/07/2021	12/08/2021	
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Metals by Saturated Paste by EPA 6010

Calcium	1.58		0.499	meq/L	10	[CALC]	12/07/2021	12/08/2021	
Magnesium	2.04		0.823	"	"	"	"	"	
Sodium	7.28		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.40			pH Units	1	B1L0715	12/07/2021	12/08/2021	
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SAR by 20B Saturated Paste

SAR	5.40			SAR	1	B1L0710	12/07/2021	12/08/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.98		0.00500	mmhos/cm	1	B1L0713	12/07/2021	12/08/2021	
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Total Metals by 6020B

Arsenic	3.1	0.0855	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Barium	206	0.042	0.25	"	"	"	"	"	
Cadmium	0.0968	0.0259	0.25	"	"	"	"	"	J
Copper	3.19	0.0806	0.25	"	"	"	"	"	

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 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-BG02@3'

12/6/2021 10:12:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y112157-04 (Soil)

Total Metals by 6020B

Lead	3.88	0.031	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Nickel	4.22	0.0633	0.25	"	"	"	"	"	
Selenium	0.189	0.103	0.25	"	"	"	"	"	J
Silver	0.0125	0.0067	0.25	"	"	"	"	"	J
Zinc	13.8	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.251	0.515	mg/Kg	1	L590916	12/06/2021	12/20/2021	
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 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-BG02@6'
12/6/2021 10:15:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-05 (Soil)

Boron (DTPA Sorbitol)

Boron	0.479		0.200	mg/L	1	B1L0712	12/07/2021	12/08/2021	
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Metals by Saturated Paste by EPA 6010

Calcium	17.1		0.499	meq/L	10	[CALC]	12/07/2021	12/08/2021	
Magnesium	15.1		0.823	"	"	"	"	"	
Sodium	27.5		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	7.86			pH Units	1	B1L0715	12/07/2021	12/08/2021	
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SAR by 20B Saturated Paste

SAR	6.86			SAR	1	B1L0710	12/07/2021	12/08/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	7.12		0.00500	mmhos/cm	1	B1L0713	12/07/2021	12/08/2021	
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Total Metals by 6020B

Arsenic	2.34	0.0855	0.25	mg/Kg	5	L591231	12/21/2021	12/27/2021	
Barium	1220	0.042	0.25	"	"	"	"	"	
Cadmium	0.093	0.0259	0.25	"	"	"	"	"	J
Copper	4.84	0.0806	0.25	"	"	"	"	"	

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Mike Jahn
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WH-BG02@6'

12/6/2021 10:15:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y112157-05 (Soil)

Total Metals by 6020B

Lead	7.62	0.031	0.25	mg/Kg	5	L591231	12/21/2021	12/27/2021	
Nickel	6.31	0.0633	0.25	"	"	"	"	"	
Selenium	0.308	0.103	0.25	"	"	"	"	"	
Silver	0.0258	0.0067	0.25	"	"	"	"	"	J
Zinc	33.3	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.248	0.509	mg/Kg	1	L590916	12/06/2021	12/20/2021	
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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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-BG03@3'

12/6/2021 10:18:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-06 (Soil)

Boron (DTPA Sorbitol)

Boron	0.342		0.201	mg/L	1	B1L0712	12/07/2021	12/08/2021	
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Metals by Saturated Paste by EPA 6010

Calcium	1.32		0.499	meq/L	10	[CALC]	12/07/2021	12/08/2021	
Magnesium	1.51		0.823	"	"	"	"	"	
Sodium	1.16		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.25			pH Units	1	B1L0715	12/07/2021	12/08/2021	
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SAR by 20B Saturated Paste

SAR	0.972			SAR	1	B1L0710	12/07/2021	12/08/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.396		0.00500	mmhos/cm	1	B1L0713	12/07/2021	12/08/2021	
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Total Metals by 6020B

Arsenic	1.85	0.0855	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Barium	475	0.042	0.25	"	"	"	"	"	
Cadmium	0.0579	0.0259	0.25	"	"	"	"	"	J
Copper	4.51	0.0806	0.25	"	"	"	"	"	

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-BG03@3'

12/6/2021 10:18:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y112157-06 (Soil)

Total Metals by 6020B

Lead	6.01	0.031	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Nickel	4.74	0.0633	0.25	"	"	"	"	"	
Selenium	0.207	0.103	0.25	"	"	"	"	"	J
Silver	0.0165	0.0067	0.25	"	"	"	"	"	J
Zinc	22.3	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.251	0.516	mg/Kg	1	L590916	12/06/2021	12/20/2021	
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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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-BG03@6'

12/6/2021 10:21:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-07 (Soil)

Boron (DTPA Sorbitol)

Boron	0.417		0.198	mg/L	1	B1L0712	12/07/2021	12/08/2021	
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Metals by Saturated Paste by EPA 6010

Calcium	0.983		0.499	meq/L	10	[CALC]	12/07/2021	12/08/2021	
Magnesium	1.19		0.823	"	"	"	"	"	
Sodium	2.33		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.32			pH Units	1	B1L0715	12/07/2021	12/08/2021	
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SAR by 20B Saturated Paste

SAR	2.24			SAR	1	B1L0710	12/07/2021	12/08/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.444		0.00500	mmhos/cm	1	B1L0713	12/07/2021	12/08/2021	
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Total Metals by 6020B

Arsenic	2.02	0.0855	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Barium	463	0.042	0.25	"	"	"	"	"	
Cadmium	0.0404	0.0259	0.25	"	"	"	"	"	J
Copper	3.48	0.0806	0.25	"	"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
6855 West 119th Avenue
Broomfield CO 80020

Mike Jahn
Project Number: 90434318
Project: KMG - Sawdey 5-30

WH-BG03@6'

12/6/2021 10:21:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y112157-07 (Soil)

Total Metals by 6020B

Lead	5.78	0.031	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Nickel	4.75	0.0633	0.25	"	"	"	"	"	
Selenium	0.217	0.103	0.25	"	"	"	"	"	J
Silver	0.0147	0.0067	0.25	"	"	"	"	"	J
Zinc	23.3	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L590916	12/06/2021	12/20/2021	
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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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-BG04@3'
12/6/2021 10:24:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-08 (Soil)

Boron (DTPA Sorbitol)

Boron	1.30		0.202	mg/L	1	B1L0712	12/07/2021	12/08/2021	
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Metals by Saturated Paste by EPA 6010

Calcium	24.6		0.499	meq/L	10	[CALC]	12/07/2021	12/08/2021	
Magnesium	33.7		0.823	"	"	"	"	"	
Sodium	39.5		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	7.81			pH Units	1	B1L0715	12/07/2021	12/08/2021	
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SAR by 20B Saturated Paste

SAR	7.30			SAR	1	B1L0710	12/07/2021	12/08/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	8.36		0.00500	mmhos/cm	1	B1L0713	12/07/2021	12/08/2021	
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Total Metals by 6020B

Arsenic	2.69	0.0855	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Barium	527	0.042	0.25	"	"	"	"	"	
Cadmium	0.122	0.0259	0.25	"	"	"	"	"	J
Copper	8.22	0.0806	0.25	"	"	"	"	"	

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-BG04@3'

12/6/2021 10:24:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y112157-08 (Soil)

Total Metals by 6020B

Lead	7.87	0.031	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Nickel	7.35	0.0633	0.25	"	"	"	"	"	
Selenium	0.439	0.103	0.25	"	"	"	"	"	
Silver	0.0295	0.0067	0.25	"	"	"	"	"	J
Zinc	32	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.245	0.503	mg/Kg	1	L590916	12/06/2021	12/20/2021	
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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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-BG04@6'
12/6/2021 10:27:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-09 (Soil)

Boron (DTPA Sorbitol)

Boron	0.762		0.200	mg/L	1	B1L0712	12/07/2021	12/08/2021	
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Metals by Saturated Paste by EPA 6010

Calcium	18.3		0.499	meq/L	10	[CALC]	12/07/2021	12/08/2021	
Magnesium	23.3		0.823	"	"	"	"	"	
Sodium	32.0		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	7.79			pH Units	1	B1L0715	12/07/2021	12/08/2021	
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SAR by 20B Saturated Paste

SAR	7.02			SAR	1	B1L0710	12/07/2021	12/08/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	6.60		0.00500	mmhos/cm	1	B1L0713	12/07/2021	12/08/2021	
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Total Metals by 7196A

Chromium, Hexavalent	ND	0.248	0.509	mg/Kg	1	L591059	12/06/2021	12/20/2021	
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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.

Tasman Geosciences
6855 West 119th Avenue
Broomfield CO 80020

Mike Jahn
Project Number: 90434318
Project: KMG - Sawdey 5-30

WH-BG04@6'

12/6/2021 10:27:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y112157-09 (Soil)

Total Metals by 6020B

Arsenic	2.61	0.0855	0.25	mg/Kg	5	L591142	12/21/2021	12/22/2021	
Barium	456	0.042	0.25	"	"	"	"	"	
Cadmium	0.144	0.0259	0.25	"	"	"	"	"	J
Copper	8.23	0.0806	0.25	"	"	"	"	"	
Lead	24.2	0.031	0.25	"	"	"	"	"	
Nickel	7.66	0.0633	0.25	"	"	"	"	"	
Selenium	0.402	0.103	0.25	"	"	"	"	"	
Silver	0.0392	0.0067	0.25	"	"	"	"	"	J
Zinc	58.3	0.534	2.5	"	"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-B01@3'

12/6/2021 10:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-10 (Soil)

Boron (DTPA Sorbitol)

Boron	0.239		0.199	mg/L	1	B1L0826	12/08/2021	12/09/2021	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	25.8		25.0	mg/kg	1	B1L0620	12/06/2021	12/07/2021	
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	53.7 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	0.00216		0.00200	mg/kg	1	B1L0619	12/06/2021	12/06/2021	
Naphthalene	0.0147		0.0100	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	12/07/2021	U

Surrogate: 1,2-Dichloroethane-d4	97.6 %		70-130			"	"	12/06/2021	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-B01@3'

12/6/2021 10:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-10 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	97.6 %		70-130			B1L06 19	12/06/2021	12/06/2021	
Surrogate: 4-Bromofluorobenzene	96.0 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.03		0.499	meq/L	10	[CALC]	12/08/2021	12/09/2021	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	0.713		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.42			pH Units	1	B1L0806	12/08/2021	12/09/2021	
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SAR by 20B Saturated Paste

SAR	0.777			SAR	1	B1L0804	12/08/2021	12/09/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.545		0.00500	mmhos/cm	1	B1L0808	12/08/2021	12/09/2021	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-B02@3'

12/6/2021 11:19:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-11 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.198	mg/L	1	B1L0826	12/08/2021	12/09/2021	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	25.6		25.0	mg/kg	1	B1L0620	12/06/2021	12/07/2021	
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	82.6 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B1L0619	12/06/2021	12/06/2021	U
Naphthalene	0.0478		0.0100	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	0.506		0.200	"	"	"	"	12/07/2021	

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-B02@3'

12/6/2021 11:19:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y112157-11 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	97.5 %		70-130			B1L06 19	12/06/2021	12/06/2021	
Surrogate: Toluene-d8	98.1 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.5 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	2.93		0.499	meq/L	10	[CALC]	12/08/2021	12/09/2021	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.60			pH Units	1	B1L0806	12/08/2021	12/09/2021	
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SAR by 20B Saturated Paste

SAR	0.211			SAR	1	B1L0804	12/08/2021	12/09/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.394		0.00500	mmhos/cm	1	B1L0808	12/08/2021	12/09/2021	
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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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B1L0619 - EPA 5030 (soil)

Blank (B1L0619-BLK1)

Prepared: 12/06/2021 Analyzed: 12/06/2021

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
Naphthalene	ND	0.0100	"							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Toluene	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	105		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	98.6		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	97.0		70-130			

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B1L0619 - EPA 5030 (soil)

LCS (B1L0619-BS1)

Prepared: 12/06/2021 Analyzed: 12/06/2021

1,2,4-Trimethylbenzene	0.0908	0.00200	mg/kg	0.100		90.8	70-130			
Naphthalene	0.0964	0.0100	"	0.100		96.4	70-130			
1,3,5-Trimethylbenzene	0.0908	0.00200	"	0.100		90.8	70-130			
Benzene	0.104	0.00200	"	0.100		104	70-130			
Ethylbenzene	0.0973	0.00200	"	0.100		97.3	70-130			
m,p-Xylene	0.196	0.00400	"	0.200		97.8	70-130			
o-Xylene	0.0990	0.00200	"	0.100		99.0	70-130			
Toluene	0.101	0.00200	"	0.100		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		108	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.0	70-130			

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B1L0619 - EPA 5030 (soil)

Matrix Spike (B1L0619-MS1)	Source: Y112147-02			Prepared: 12/06/2021 Analyzed: 12/06/2021						
1,2,4-Trimethylbenzene	0.0761	0.00200	mg/kg	0.100	ND	76.1	70-130			
Naphthalene	0.0822	0.0100	"	0.100	0.00268	79.5	70-130			
1,3,5-Trimethylbenzene	0.0752	0.00200	"	0.100	ND	75.2	70-130			
Benzene	0.0900	0.00200	"	0.100	ND	90.0	70-130			
Ethylbenzene	0.0819	0.00200	"	0.100	ND	81.9	70-130			
m,p-Xylene	0.163	0.00400	"	0.200	ND	81.6	70-130			
o-Xylene	0.0838	0.00200	"	0.100	ND	83.8	70-130			
Toluene	0.0858	0.00200	"	0.100	ND	85.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.3	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B1L0619 - EPA 5030 (soil)

Matrix Spike Dup (B1L0619-MSD1)	Source: Y112147-02			Prepared: 12/06/2021 Analyzed: 12/06/2021						
1,2,4-Trimethylbenzene	0.0525	0.00200	mg/kg	0.100	ND	52.5	70-130	36.6	20	QM-07
Naphthalene	0.0579	0.0100	"	0.100	0.00268	55.2	70-130	34.7	20	QM-07
1,3,5-Trimethylbenzene	0.0521	0.00200	"	0.100	ND	52.1	70-130	36.2	20	QM-07
Benzene	0.0720	0.00200	"	0.100	ND	72.0	70-130	22.2	20	QM-07
Ethylbenzene	0.0612	0.00200	"	0.100	ND	61.2	70-130	28.9	20	QM-07
m,p-Xylene	0.120	0.00400	"	0.200	ND	60.2	70-130	30.2	20	QM-07
o-Xylene	0.0622	0.00200	"	0.100	ND	62.2	70-130	29.6	20	QM-07
Toluene	0.0676	0.00200	"	0.100	ND	67.6	70-130	23.6	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.8	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B1L0620 - EPA 3550B										
Blank (B1L0620-BLK1)										
					Prepared: 12/06/2021 Analyzed: 12/06/2021					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	34		"	49.8		68.4	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B1L0620 - EPA 3550B

LCS (B1L0620-BS1)

Prepared: 12/06/2021 Analyzed: 12/08/2021

Diesel (C10-C28)	367	25.0	mg/kg	500		73.4	70-130			
Residual Range Organics (C28-C40)	349	100	"	500		69.7	70-130			J-02
Surrogate: o-Terphenyl	11		"	24.9		43.7	50-150			J-02

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B1L0620 - EPA 3550B

Matrix Spike (B1L0620-MS1)	Source: Y112147-02			Prepared: 12/06/2021 Analyzed: 12/08/2021						
Diesel (C10-C28)	553	25.0	mg/kg	500	ND	111	70-130			
Residual Range Organics (C28-C40)	533	100	"	500	56.2	95.4	70-130			
Surrogate: o-Terphenyl	21		"	24.9		83.1	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

**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 B1L0620 - EPA 3550B

Matrix Spike Dup (B1L0620-MSD1)	Source: Y112147-02		Prepared: 12/06/2021 Analyzed: 12/08/2021							
Diesel (C10-C28)	498	25.0	mg/kg	500	ND	99.6	70-130	10.5	35	
Residual Range Organics (C28-C40)	494	100	"	500	56.2	87.5	70-130	7.64	35	
Surrogate: o-Terphenyl	22		"	24.9		89.8	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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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Saturated Paste - 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 B1L0713 - NO PREP

Blank (B1L0713-BLK1)

Prepared: 12/07/2021 Analyzed: 12/08/2021

Specific Conductance (EC) 0.000900 0.00500 mmhos/cm

Duplicate (B1L0713-DUP1)

Source: Y112158-05

Prepared: 12/07/2021 Analyzed: 12/08/2021

Specific Conductance (EC) 0.490 0.00500 mmhos/cm

0.447 9.03 25

Batch B1L0715 - NO PREP

Duplicate (B1L0715-DUP1)

Source: Y112147-01

Prepared: 12/07/2021 Analyzed: 12/08/2021

pH 7.90 pH Units

8.04 1.76 25

Batch B1L0806 - NO PREP

Duplicate (B1L0806-DUP1)

Source: Y112176-12

Prepared: 12/08/2021 Analyzed: 12/09/2021

pH 8.86 pH Units

8.99 1.46 25

Batch B1L0808 - NO PREP

Blank (B1L0808-BLK1)

Prepared: 12/08/2021 Analyzed: 12/09/2021

Specific Conductance (EC) 0.000900 0.00500 mmhos/cm

Duplicate (B1L0808-DUP1)

Source: Y112176-12

Prepared: 12/08/2021 Analyzed: 12/09/2021

Specific Conductance (EC) 3.00 0.00500 mmhos/cm

2.87 4.60 25

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

Total Metals by 6020B - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L591231 - 3050B

MSD (L 85184-MSD-L591231)		Source: 85184			Prepared: 12/21/2021 Analyzed: 12/27/2021					
Lead	11.3	0.031	mg/Kg	2.5	9	92	75-125	11.6	80	
Nickel	11.6	0.0633	"	2.5	9.52	83	75-125	30	80	
Cadmium	0.588	0.0259	"	0.499	0.147	118	75-125	18.9	80	
Arsenic	4.29	0.0855	"	2.5	2.69	64	75-125	12.4	80	*
Barium	75.3	0.042	"	4.99	79.7	NR	75-125	7.2	80	*
Zinc	60.5	0.534	"	25	40.2	81	75-125	16.8	80	
Silver	0.463	0.0067	"	0.499	0.0221	93	75-125	1	80	
Selenium	4.09	0.103	"	4.99	0.292	76	75-125	8.4	80	
Copper	10.3	0.0806	"	2.5	7.72	103	75-125	4.7	80	

MS (L 85184-MS-L591231)		Source: 85184			Prepared: 12/21/2021 Analyzed: 12/27/2021					
Arsenic	4.86	0.0855	mg/Kg	2.48	2.69	88	75-125			
Nickel	15.7	0.0633	"	2.48	9.52	249	75-125			*
Cadmium	0.711	0.0259	"	0.496	0.147	143	75-125			*
Lead	12.7	0.031	"	2.48	9	149	75-125			*
Selenium	3.76	0.103	"	4.96	0.292	70	75-125			*
Silver	0.468	0.0067	"	0.496	0.0221	94	75-125			
Zinc	71.6	0.534	"	24.8	40.2	127	75-125			*
Copper	10.8	0.0806	"	2.48	7.72	124	75-125			
Barium	81	0.042	"	4.96	79.7	26	75-125			*

LCS (LCS-L591231)		Prepared: 12/21/2021 Analyzed: 12/27/2021								
Cadmium	0.459	0.0259	mg/Kg	0.5		92	80-120			
Arsenic	2.39	0.0855	"	2.5		96	80-120			
Silver	0.455	0.0067	"	0.5		91	80-120			
Selenium	4.8	0.103	"	5		96	80-120			
Nickel	2.22	0.0633	"	2.5		89	80-120			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

Total Metals by 6020B - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L591231 - 3050B

LCS (LCS-L591231)

Prepared: 12/21/2021 Analyzed: 12/27/2021

Lead	2.3	0.031	mg/Kg	2.5		92	80-120			
Zinc	22.5	0.534	"	25		90	80-120			
Barium	4.98	0.042	"	5		100	80-120			
Copper	2.19	0.0806	"	2.5		88	80-120			

LRB (LRB-L591231)

Prepared: 12/21/2021 Analyzed: 12/27/2021

Nickel	ND	0.25	mg/Kg				-			
Lead	ND	0.25	"				-			
Cadmium	ND	0.25	"				-			
Barium	0.289	0.25	"				-			*
Arsenic	ND	0.25	"				-			
Selenium	ND	0.25	"				-			
Silver	ND	0.25	"				-			
Zinc	ND	2.5	"				-			
Copper	ND	0.25	"				-			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

**Total Metals by 7196A - Quality Control
 Waypoint Analytical, LLC.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L591059 -										
DUP (L 99491-DUP)		Source: Y112157-09			Prepared: Analyzed: 12/20/2021					
Chromium, Hexavalent	ND	0.246	mg/Kg		<0.505		-	0	20	
MS (L 99491-MS)		Source: Y112157-09			Prepared: Analyzed: 12/20/2021					
Chromium, Hexavalent	0.949	0.253	mg/Kg	8.33	<0.253	11	75-125			*
LCS (LCS)		Prepared: Analyzed: 12/20/2021								
Chromium, Hexavalent	7.57	0.244	mg/Kg	8		95	75-125			
LRB (LRB)		Prepared: Analyzed: 12/20/2021								
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

Total Metals by 6020B - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L591142 - 3050B

MSD (L 99531-MSD-L591142)		Source: 99531			Prepared: 12/21/2021 Analyzed: 12/22/2021					
Silver	0.372	0.0067	mg/Kg	0.467	0.0207	80	75-125	11.3	80	
Selenium	8.65	0.103	"	4.67	0.284	179	75-125	2.7	80	*
Nickel	9.59	0.0633	"	2.33	8.51	46	75-125	13.1	80	*
Lead	8.78	0.031	"	2.33	7.89	38	75-125	8.9	80	*
Copper	8.51	0.0806	"	2.33	7.48	44	75-125	3.8	80	*
Cadmium	0.43	0.0259	"	0.467	0.0983	92	75-125	8.9	80	
Barium	74	0.042	"	4.67	67.1	148	75-125	10	80	*
Arsenic	3.51	0.0855	"	2.33	2.08	61	75-125	6.1	80	*
Zinc	53.7	0.534	"	23.3	40	59	75-125	11	80	*

MS (L 99531-MS-L591142)		Source: 99531			Prepared: 12/21/2021 Analyzed: 12/29/2021					
Copper	8.19	0.0806	mg/Kg	2.46	7.48	29	75-125			*
Zinc	48.1	0.534	"	24.6	40	33	75-125			*
Silver	0.332	0.0067	"	0.492	0.0207	68	75-125			*
Selenium	8.89	0.103	"	4.92	0.284	175	75-125			*
Lead	8.03	0.031	"	2.46	7.89	6	75-125			*
Cadmium	0.393	0.0259	"	0.492	0.0983	80	75-125			
Barium	66.9	0.042	"	4.92	67.1	NR	75-125			*
Arsenic	3.3	0.0855	"	2.46	2.08	50	75-125			*
Nickel	8.41	0.0633	"	2.46	8.51	NR	75-125			*

LCS (LCS-L591142)		Prepared: 12/21/2021 Analyzed: 12/22/2021								
Cadmium	0.483	0.0259	mg/Kg	0.5		97	80-120			
Silver	0.488	0.0067	"	0.5		98	80-120			
Arsenic	2.29	0.0855	"	2.5		92	80-120			
Barium	5.31	0.042	"	5		106	80-120			
Copper	2.27	0.0806	"	2.5		91	80-120			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

Total Metals by 6020B - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L591142 - 3050B

LCS (LCS-L591142)

Prepared: 12/21/2021 Analyzed: 12/28/2021

Nickel	2.27	0.0633	mg/Kg	2.5		91	80-120			
Selenium	5.08	0.103	"	5		102	80-120			
Lead	2.46	0.031	"	2.5		98	80-120			
Zinc	21.5	0.534	"	25		86	80-120			

LRB (LRB-L591142)

Prepared: 12/21/2021 Analyzed: 12/22/2021

Silver	ND	0.25	mg/Kg				-			
Selenium	ND	0.25	"				-			
Nickel	ND	0.25	"				-			
Lead	ND	0.25	"				-			
Copper	ND	0.25	"				-			
Cadmium	ND	0.25	"				-			
Barium	ND	0.25	"				-			
Arsenic	ND	0.25	"				-			
Zinc	ND	2.5	"				-			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

Total Metals by 7196A - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L590916 -										
DUP (L 99461-DUP)		Source: 99461			Prepared: Analyzed: 12/20/2021					
Chromium, Hexavalent	ND	0.244	mg/Kg		<0.501		-	0	20	
MS (L 99461-MS)		Source: 99461			Prepared: Analyzed: 12/20/2021					
Chromium, Hexavalent	6.16	0.244	mg/Kg	7.86	<0.244	78	75-125			

Origins Laboratory, Inc.



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Tasman Geosciences
6855 West 119th Avenue
Broomfield CO 80020

Mike Jahn
Project Number: 90434318
Project: KMG - Sawdey 5-30

Notes and Definitions

- U Sample is Non-Detect.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- J-02 Reported value failed to meet established quality control criteria for the precision accuracy.
- J Estimated Value. Analyte below reported quantitation limit.
- * QC Failure
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported on a wet weight basis.

Origins Laboratory, Inc.



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December 16, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

Project Name - KMG - Sawdey 5-30

Project Number - 90434318

Attached are your analytical results for KMG - Sawdey 5-30 received by Origins Laboratory, Inc. December 08, 2021. This project is associated with Origins project number Y112219-01.

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



Tasman Geosciences
6855 West 119th Avenue
Broomfield CO 80020

Mike Jahn
Project Number: 90434318
Project: KMG - Sawdey 5-30

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL-B01@3'	Y112219-01	Soil	December 8, 2021 10:15	12/08/2021 16:49
FL-B02@3'	Y112219-02	Soil	December 8, 2021 10:18	12/08/2021 16:49

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y112219

Client: Tasman
 Client/Project ID: Sawdey 5-30

Checklist Completed by: JG
 Date/time completed: 12/8/21

Shipped Via: HD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A

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

Cooler Number/Temperature: 1/21 °C _____ °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⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" 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"/>		
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"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<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"/>	
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) Jm

Date/Time Reviewed 12-9-21

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-B01@3'

12/8/2021 10:15:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y112219-01 (Soil)

PAH by 8270D SIM

1-Methylnaphthalene	0.0317	0.00033	0.00067	mg/Kg	1	L589875	12/14/2021	12/14/2021	
2-Methylnaphthalene	0.0591	0.00039	0.00067	"	"	"	"	"	
Acenaphthene	0.00113	0.0003	0.00067	"	"	"	"	"	
Anthracene	ND	0.00033	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.00041	0.00067	"	"	"	"	"	
Benzo(a)pyrene	0.000885	0.00014	0.00067	"	"	"	"	"	B
Benzo(b)fluoranthene	0.00127	0.00021	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.00013	0.00067	"	"	"	"	"	
Chrysene	0.00385	0.00027	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	0.00055	0.00036	0.00067	"	"	"	"	"	JB
Fluoranthene	0.000714	0.00039	0.00067	"	"	"	"	"	
Fluorene	0.0016	0.00029	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	0.0008	0.00029	0.00067	"	"	"	"	"	B
Naphthalene	0.0319	0.000467	0.00067	"	"	"	"	"	
Pyrene	0.00159	0.00059	0.00067	"	"	"	"	"	B

Surrogate: 2-Fluorobiphenyl	50.6 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	51.2 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	43.1 %	29-110	"	"	"

Total Metals by 6020B

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-B01@3'

12/8/2021 10:15:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
 Y112219-01 (Soil)

Total Metals by 6020B

Arsenic	2.04	0.0855	0.25	mg/Kg	5	L589538	12/13/2021	12/13/2021	
Barium	1680	0.171	1	"	20	"	"	"	
Cadmium	0.114	0.0259	0.25	"	5	"	"	"	J
Copper	9.46	0.0806	0.25	"	"	"	"	"	
Lead	10.1	0.031	0.25	"	"	"	"	"	
Nickel	7.4	0.0633	0.25	"	"	"	"	"	
Selenium	0.116	0.103	0.25	"	"	"	"	"	J
Silver	0.0233	0.0067	0.25	"	"	"	"	"	J
Zinc	52.2	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.252	0.518	mg/Kg	1	L589891	12/08/2021	12/14/2021	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-B02@3'

12/8/2021 10:18:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y112219-02 (Soil)

PAH by 8270D SIM

1-Methylnaphthalene	0.00363	0.00033	0.00067	mg/Kg	1	L589875	12/14/2021	12/14/2021	
2-Methylnaphthalene	0.00736	0.00039	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.0003	0.00067	"	"	"	"	"	
Anthracene	ND	0.00033	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.00041	0.00067	"	"	"	"	"	
Benzo(a)pyrene	0.000548	0.00014	0.00067	"	"	"	"	"	JB
Benzo(b)fluoranthene	0.000505	0.00021	0.00067	"	"	"	"	"	J
Benzo(k)fluoranthene	ND	0.00013	0.00067	"	"	"	"	"	
Chrysene	0.000397	0.00027	0.00067	"	"	"	"	"	J
Dibenz(a,h)anthracene	ND	0.00036	0.00067	"	"	"	"	"	
Fluoranthene	0.000594	0.00039	0.00067	"	"	"	"	"	J
Fluorene	ND	0.00029	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	0.00046	0.00029	0.00067	"	"	"	"	"	JB
Naphthalene	0.00475	0.000467	0.00067	"	"	"	"	"	
Pyrene	0.000607	0.00059	0.00067	"	"	"	"	"	JB

Surrogate: 2-Fluorobiphenyl	58.6 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	74 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	48 %	29-110	"	"	"

Total Metals by 6020B

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-B02@3'

12/8/2021 10:18:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
 Y112219-02 (Soil)

Total Metals by 6020B

Arsenic	1.13	0.0855	0.25	mg/Kg	5	L589538	12/13/2021	12/13/2021	
Barium	64.5	0.042	0.25	"	"	"	"	"	
Cadmium	0.246	0.0259	0.25	"	"	"	"	"	J
Copper	9.35	0.0806	0.25	"	"	"	"	"	
Lead	5.83	0.031	0.25	"	"	"	"	"	
Nickel	8.05	0.0633	0.25	"	"	"	"	"	
Selenium	ND	0.103	0.25	"	"	"	"	"	
Silver	0.021	0.0067	0.25	"	"	"	"	"	J
Zinc	31.4	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L589891	12/08/2021	12/14/2021	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L589875 - 3550B

MSD (L 95879-MSD-L589875)		Source: 95879			Prepared: 12/14/2021 Analyzed: 12/14/2021					
Pyrene	0.12	0.00059	mg/Kg	0.163	<0.000590	73.6	30-130	3.2	30	
Anthracene	0.114	0.00033	"	0.163	<0.000330	69.9	30-130	2.5	30	
Benzo(a)anthracene	0.109	0.00041	"	0.163	<0.000410	66.8	30-130	3.6	30	
Benzo(a)pyrene	0.118	0.00014	"	0.163	0.0003	72.3	30-130	1.6	30	
Benzo(b)fluoranthene	0.136	0.00021	"	0.163	<0.000210	83.4	30-130	5.7	30	
Chrysene	0.115	0.00027	"	0.163	<0.000270	70.5	30-130	2.5	30	
2-Methylnaphthalene	0.103	0.00039	"	0.163	<0.000390	63.1	30-130	1.9	30	
Naphthalene	0.101	0.000467	"	0.163	<0.000467	61.9	30-130	1.9	30	
Indeno(1,2,3-cd)pyrene	0.164	0.00029	"	0.163	<0.000290	101	30-130	0.6	30	
Fluorene	0.112	0.00029	"	0.163	<0.000290	68.7	30-130	1.7	30	
Fluoranthene	0.12	0.00039	"	0.163	<0.000390	73.6	30-130	1.6	30	
Dibenz(a,h)anthracene	0.176	0.00036	"	0.163	<0.000360	108	30-130	5.5	30	
Benzo(k)fluoranthene	0.128	0.00013	"	0.163	<0.000130	78.5	30-130	4.5	30	
1-Methylnaphthalene	0.103	0.00033	"	0.163	<0.000330	63.1	30-130	1.9	30	
Acenaphthene	0.106	0.0003	"	0.163	<0.000300	65	30-130	3.7	30	
Surrogate: 4-Terphenyl-d14	71.4		"	0.326	239	71.4	33-122			
Surrogate: 2-Fluorobiphenyl	57.9		"	0.326	197	57.9	33-115			
Surrogate: Nitrobenzene-d5	45.7		"	0.326	161	45.7	29-110			

MS (L 95879-MS-L589875)		Source: 95879			Prepared: 12/14/2021 Analyzed: 12/14/2021					
Benzo(k)fluoranthene	0.134	0.00013	mg/Kg	0.164	<0.000130	81.7	30-130			
Fluoranthene	0.122	0.00039	"	0.164	<0.000390	74.3	30-130			
Fluorene	0.114	0.00029	"	0.164	<0.000290	69.5	30-130			
Indeno(1,2,3-cd)pyrene	0.165	0.00029	"	0.164	<0.000290	101	30-130			
Naphthalene	0.103	0.000467	"	0.164	<0.000467	62.8	30-130			
Pyrene	0.124	0.00059	"	0.164	<0.000590	75.6	30-130			
Dibenz(a,h)anthracene	0.186	0.00036	"	0.164	<0.000360	113	30-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L589875 - 3550B

MS (L 95879-MS-L589875)	Source: 95879			Prepared: 12/14/2021 Analyzed: 12/14/2021						
1-Methylnaphthalene	0.105	0.00033	mg/Kg	0.164	<0.000330	64	30-130			
2-Methylnaphthalene	0.105	0.00039	"	0.164	<0.000390	64	30-130			
Benzo(b)fluoranthene	0.144	0.00021	"	0.164	<0.000210	87.8	30-130			
Benzo(a)pyrene	0.12	0.00014	"	0.164	0.0003	73.1	30-130			
Benzo(a)anthracene	0.113	0.00041	"	0.164	<0.000410	68.9	30-130			
Anthracene	0.117	0.00033	"	0.164	<0.000330	71.3	30-130			
Acenaphthene	0.11	0.0003	"	0.164	<0.000300	67	30-130			
Chrysene	0.118	0.00027	"	0.164	<0.000270	71.9	30-130			
Surrogate: Nitrobenzene-d5	45.8		"	0.329	161	45.8	29-110			
Surrogate: 4-Terphenyl-d14	72		"	0.329	239	72	33-122			
Surrogate: 2-Fluorobiphenyl	59.2		"	0.329	197	59.2	33-115			

LCS (LCS-L589875)	Prepared: 12/14/2021 Analyzed: 12/14/2021									
Acenaphthene	0.104	0.0003	mg/Kg	0.167		62.2	30-130			
Anthracene	0.113	0.00033	"	0.167		67.6	30-130			
1-Methylnaphthalene	0.0991	0.00033	"	0.167		59.3	30-130			
2-Methylnaphthalene	0.0981	0.00039	"	0.167		58.7	30-130			
Naphthalene	0.0975	0.000467	"	0.167		58.3	30-130			
Indeno(1,2,3-cd)pyrene	0.189	0.00029	"	0.167		113	30-130			
Fluorene	0.111	0.00029	"	0.167		66.4	30-130			
Fluoranthene	0.12	0.00039	"	0.167		71.8	30-130			
Chrysene	0.12	0.00027	"	0.167		71.8	30-130			
Benzo(k)fluoranthene	0.134	0.00013	"	0.167		80.2	30-130			
Benzo(b)fluoranthene	0.15	0.00021	"	0.167		89.8	30-130			
Benzo(a)pyrene	0.124	0.00014	"	0.167		74.2	30-130			
Benzo(a)anthracene	0.111	0.00041	"	0.167		66.4	30-130			
Dibenz(a,h)anthracene	0.204	0.00036	"	0.167		122	30-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L589875 - 3550B

LCS (LCS-L589875)

Prepared: 12/14/2021 Analyzed: 12/14/2021

Pyrene	0.12	0.00059	mg/Kg	0.167		71.8	30-130			
Surrogate: 2-Fluorobiphenyl	59.4		"	0.333		59.4	33-115			
Surrogate: 4-Terphenyl-d14	76.5		"	0.333		76.5	33-122			
Surrogate: Nitrobenzene-d5	47.4		"	0.333		47.4	29-110			

LRB (LRB-L589875)

Prepared: 12/14/2021 Analyzed: 12/14/2021

Benzo(k)fluoranthene	0.000397	0.00067	mg/Kg				-			J
Chrysene	ND	0.00067	"				-			
Dibenz(a,h)anthracene	0.000613	0.00067	"				-			J
Fluoranthene	ND	0.00067	"				-			
Fluorene	ND	0.00067	"				-			
Naphthalene	ND	0.00067	"				-			
Anthracene	ND	0.00067	"				-			
Indeno(1,2,3-cd)pyrene	0.000656	0.00067	"				-			J
Benzo(a)anthracene	ND	0.00067	"				-			
1-Methylnaphthalene	ND	0.00067	"				-			
Pyrene	0.00061	0.00067	"				-			J
2-Methylnaphthalene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Benzo(a)pyrene	0.000507	0.00067	"				-			J
Surrogate: Nitrobenzene-d5	46.8		"	0.333		46.8	29-110			
Surrogate: 2-Fluorobiphenyl	59.4		"	0.333		59.4	33-115			
Surrogate: 4-Terphenyl-d14	73.5		"	0.333		73.5	33-122			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

Total Metals by 6020B - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L589538 - 3050B

MSD (L 96307-MSD-L589538)		Source: 96307			Prepared: 12/13/2021 Analyzed: 12/13/2021					
Cadmium	0.528	0.0259	mg/Kg	0.495	0.0496	107	75-125	9.5	80	
Barium	49	0.042	"	4.95	44.7	87	75-125	9.5	80	
Copper	6.77	0.0806	"	2.48	4.33	99	75-125	2.2	80	
Lead	6.78	0.031	"	2.48	4.19	105	75-125	3.7	80	
Nickel	6.6	0.0633	"	2.48	4.37	90	75-125	0.3	80	
Selenium	4.01	0.103	"	4.95	<0.103	81	75-125	9.1	80	
Silver	0.491	0.0067	"	0.495	0.0145	99	75-125	8.9	80	
Zinc	40.5	0.534	"	24.8	17.7	92	75-125	1.9	80	
Arsenic	2.88	0.0855	"	2.48	0.932	79	75-125	7.5	80	

MS (L 96307-MS-L589538)		Source: 96307			Prepared: 12/13/2021 Analyzed: 12/13/2021					
Zinc	39.7	0.534	mg/Kg	23.5	17.7	94	75-125			
Arsenic	2.67	0.0855	"	2.35	0.932	74	75-125			*
Barium	53.9	0.042	"	4.7	44.7	196	75-125			*
Cadmium	0.48	0.0259	"	0.47	0.0496	102	75-125			
Copper	6.62	0.0806	"	2.35	4.33	97	75-125			
Lead	6.53	0.031	"	2.35	4.19	100	75-125			
Nickel	6.58	0.0633	"	2.35	4.37	94	75-125			
Selenium	3.66	0.103	"	4.7	<0.103	78	75-125			
Silver	0.449	0.0067	"	0.47	0.0145	96	75-125			

LCS (LCS-L589538)		Prepared: 12/13/2021 Analyzed: 12/13/2021								
Lead	2.47	0.031	mg/Kg	2.5		99	80-120			
Zinc	23.5	0.534	"	25		94	80-120			
Silver	0.475	0.0067	"	0.5		95	80-120			
Nickel	2.36	0.0633	"	2.5		94	80-120			
Copper	2.47	0.0806	"	2.5		99	80-120			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

Total Metals by 6020B - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L589538 - 3050B

LCS (LCS-L589538)

Prepared: 12/13/2021 Analyzed: 12/13/2021

Barium	4.96	0.042	mg/Kg	5		99	80-120			
Arsenic	2.25	0.0855	"	2.5		90	80-120			
Cadmium	0.478	0.0259	"	0.5		96	80-120			
Selenium	4.55	0.103	"	5		91	80-120			

LRB (LRB-L589538)

Prepared: 12/13/2021 Analyzed: 12/13/2021

Arsenic	ND	0.25	mg/Kg				-			
Zinc	ND	2.5	"				-			
Silver	ND	0.25	"				-			
Selenium	ND	0.25	"				-			
Nickel	ND	0.25	"				-			
Lead	ND	0.25	"				-			
Copper	ND	0.25	"				-			
Barium	0.065	0.25	"				-			J
Cadmium	ND	0.25	"				-			

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

Total Metals by 7196A - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L589891 -										
DUP (L 95898-DUP)		Source: 95898			Prepared: Analyzed: 12/14/2021					
Chromium, Hexavalent	ND	0.249	mg/Kg		<0.512		-	0	20	
MS (L 95898-MS)		Source: 95898			Prepared: Analyzed: 12/14/2021					
Chromium, Hexavalent	7.08	0.244	mg/Kg	7.92	<0.244	89	75-125			
LCS (LCS)		Prepared: Analyzed: 12/14/2021								
Chromium, Hexavalent	7.75	0.244	mg/Kg	8		97	75-125			
LRB (LRB)		Prepared: Analyzed: 12/14/2021								
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



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Tasman Geosciences
6855 West 119th Avenue
Broomfield CO 80020

Mike Jahn
Project Number: 90434318
Project: KMG - Sawdey 5-30

Notes and Definitions

- JB [Undefined]
- J Estimated Value. Analyte below reported quantitation limit.
- B Analyte detected in associated method blank.
- * QC Failure
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported on a wet weight basis.

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.

February 18, 2022

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

Project Name - KMG - Sawdey 5-30

Project Number - 90434318

Attached are your analytical results for KMG - Sawdey 5-30 received by Origins Laboratory, Inc. February 09, 2022. This project is associated with Origins project number Y202191-01.

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



Tasman Geosciences
6855 West 119th Avenue
Broomfield CO 80020

Mike Jahn
Project Number: 90434318
Project: KMG - Sawdey 5-30

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-B02@7'	Y202191-01	Soil	February 9, 2022 13:26	02/09/2022 16:52
WH-N02@6'	Y202191-02	Soil	February 9, 2022 13:28	02/09/2022 16:52
WH-S02@6'	Y202191-03	Soil	February 9, 2022 13:30	02/09/2022 16:52
WH-E02@6'	Y202191-04	Soil	February 9, 2022 13:32	02/09/2022 16:52
WH-W02@6'	Y202191-05	Soil	February 9, 2022 13:34	02/09/2022 16:52
FL-B03@4'	Y202191-06	Soil	February 9, 2022 14:00	02/09/2022 16:52
FL-N01@3'	Y202191-07	Soil	February 9, 2022 14:02	02/09/2022 16:52
FL-S01@3'	Y202191-08	Soil	February 9, 2022 14:04	02/09/2022 16:52
FL-E01@3'	Y202191-09	Soil	February 9, 2022 14:06	02/09/2022 16:52
FL-W01@3'	Y202191-10	Soil	February 9, 2022 14:08	02/09/2022 16:52

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 page of

ORIGINS
 LABORATORY, INC

Client: Orly Tasman
 Project Manager: Mike Jahn
 Address: _____
 Project Name: Sawdey 5-30
 Project Number: _____
 Telephone Number: _____
 Samples Collected By: BL
 Email Address: tasman@tasmangeo.com

1725 EIK Pidge | 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	Air Summa #	Other	DRUGS	PHYS		Barium
WH-0020-F'	2-9-08	1306	2	X					X			X	X	X	
WH-N02 OG'		1328													
WH-S02 OG'		1330													
WH-E02 OG'		1332													
WH-N02 OG'		1334													
FI-0020-H'		1408													
FI-N02 ?'		1408													
FI-S01 D ?'		1404													
FI-E01 D ?'		1406													
FI-W01 D ?'		1408													
Relinquished By: <u>BL</u>	Date: <u>2-9-08</u>	Time: <u>1408</u>	Date: <u>2-9-08</u>												
Relinquished By: <u>BL</u>	Date: <u>2-9-08</u>	Time: <u>1408</u>	Date: <u>2-9-08</u>												

Date Results Needed

Temp Received- 4.2

Origins Laboratory, Inc.

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

Origins Laboratory

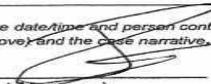
F-012207-01-R1
 Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 202191 Client: Tasman
 Client Project ID: Sawdey 5-30
 Checklist Completed by: SG Shipped Via: HD
 Date/time completed: 2/9/22 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1, A200 / _____ °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⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" 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"/>		
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"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<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"/>	
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 2/9/22

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-B02@7'
2/9/2022 1:26:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-01 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2B0928	02/09/2022	02/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	101 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2B0923	02/09/2022	02/09/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %		70-130			"	"	"	
Surrogate: Toluene-d8	97.2 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %		70-130			"	"	"	

PAH by 8270D SIM

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-B02@7'
2/9/2022 1:26:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y202191-01 (Soil)

PAH by 8270D SIM

1-Methylnaphthalene	0.000376	0.000364	0.00067	mg/Kg	1	L599814	02/16/2022	02/17/2022	J
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	47.3 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	61 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	48.5 %	29-110	"	"	"

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-B02@7'
2/9/2022 1:26:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-01 (Soil)

pH in Soil by 9045D

pH	8.30			pH Units	1	B2B1008	02/10/2022	02/11/2022	
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Total Metals by 6020B

Barium	145	0.042	0.25	mg/Kg	5	L599214	02/14/2022	02/16/2022	
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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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-N02@6'
2/9/2022 1:28:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-02 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2B0928	02/09/2022	02/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	86.6 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2B0923	02/09/2022	02/09/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %		70-130			"	"	"	
Surrogate: Toluene-d8	95.7 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %		70-130			"	"	"	

PAH by 8270D SIM

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-N02@6'
2/9/2022 1:28:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y202191-02 (Soil)

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	50.9 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	61.5 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	46.1 %	29-110	"	"	"

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-N02@6'
2/9/2022 1:28:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-02 (Soil)

pH in Soil by 9045D

pH	8.50			pH Units	1	B2B1008	02/10/2022	02/11/2022	
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Total Metals by 6020B

Barium	60.2	0.042	0.25	mg/Kg	5	L599214	02/14/2022	02/16/2022	
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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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-S02@6'
2/9/2022 1:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-03 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2B0928	02/09/2022	02/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	87.3 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2B0923	02/09/2022	02/09/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %		70-130			"	"	"	
Surrogate: Toluene-d8	95.5 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %		70-130			"	"	"	

PAH by 8270D SIM

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-S02@6'
2/9/2022 1:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y202191-03 (Soil)

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L599814	02/16/2022	02/17/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	47.3 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	56.6 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	46.1 %	29-110	"	"	"

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-S02@6'
2/9/2022 1:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-03 (Soil)

pH in Soil by 9045D

pH	8.27			pH Units	1	B2B1008	02/10/2022	02/11/2022	
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Total Metals by 6020B

Barium	109	0.042	0.25	mg/Kg	5	L599214	02/14/2022	02/16/2022	
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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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-E02@6'

2/9/2022 1:32:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-04 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2B0928	02/09/2022	02/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	85.2 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2B0923	02/09/2022	02/10/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.7 %		70-130			"	"	02/09/2022	
Surrogate: Toluene-d8	97.5 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.8 %		70-130			"	"	"	

PAH by 8270D SIM

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-E02@6'
2/9/2022 1:32:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y202191-04 (Soil)

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	41.8 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	63.6 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	40.9 %	29-110	"	"	"

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-E02@6'
2/9/2022 1:32:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-04 (Soil)

pH in Soil by 9045D

pH	8.41			pH Units	1	B2B1008	02/10/2022	02/11/2022	
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Total Metals by 6020B

Barium	35	0.042	0.25	mg/Kg	5	L599214	02/14/2022	02/16/2022	
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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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-W02@6'
2/9/2022 1:34:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-05 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2B0928	02/09/2022	02/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	108 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2B0923	02/09/2022	02/09/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %		70-130			"	"	"	
Surrogate: Toluene-d8	96.6 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.5 %		70-130			"	"	"	

PAH by 8270D SIM

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-W02@6'
 2/9/2022 1:34:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
 Y202191-05 (Soil)

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	0.00066	0.000585	0.00067	"	"	"	"	"	J
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	44.2 %		33-115		"	"	"	"	
Surrogate: 4-Terphenyl-d14	60.1 %		33-122		"	"	"	"	
Surrogate: Nitrobenzene-d5	41.4 %		29-110		"	"	"	"	

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

WH-W02@6'
2/9/2022 1:34:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-05 (Soil)

pH in Soil by 9045D

pH	8.33			pH Units	1	B2B1008	02/10/2022	02/11/2022	
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Total Metals by 6020B

Barium	48.2	0.042	0.25	mg/Kg	5	L599214	02/14/2022	02/16/2022	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-B03@4'

2/9/2022 2:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-06 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2B0928	02/09/2022	02/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	104 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

Benzene	ND		0.00200	mg/kg	1	B2B0923	02/09/2022	02/09/2022	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %		70-130			"	"	"	
Surrogate: Toluene-d8	96.6 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.6 %		70-130			"	"	"	

PAH by 8270D SIM

1-Methylnaphthalene	0.00854	0.000364	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	
2-Methylnaphthalene	0.0163	0.000645	0.00067	"	"	"	"	"	

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-B03@4'

2/9/2022 2:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y202191-06 (Soil)

PAH by 8270D SIM

Acenaphthene	ND	0.000304	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	0.000915	0.000468	0.00067	"	"	"	"	"	B
Benzo(b)fluoranthene	0.000998	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	0.000452	0.000437	0.00067	"	"	"	"	"	J
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	0.00112	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	0.00483	0.000484	0.00067	"	"	"	"	"	
Pyrene	0.00121	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	54.7 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	64.7 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	49.8 %		29-110			"	"	"	

pH in Soil by 9045D

pH	7.89		pH Units	1	B2B1008	02/10/2022	02/11/2022		
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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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-N01@3'

2/9/2022 2:02:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y202191-07 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2B0928	02/09/2022	02/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	85.0 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

Benzene	ND		0.00200	mg/kg	1	B2B0923	02/09/2022	02/09/2022	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %		70-130			"	"	"	
Surrogate: Toluene-d8	96.4 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %		70-130			"	"	"	

PAH by 8270D SIM

1-Methylnaphthalene	0.000586	0.000364	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	J
2-Methylnaphthalene	0.00167	0.000645	0.00067	"	"	"	"	"	

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-N01@3'

2/9/2022 2:02:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
 Y202191-07 (Soil)

PAH by 8270D SIM

Acenaphthene	ND	0.000304	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	
Anthracene	0.000335	0.000334	0.00067	"	"	"	"	"	J
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	0.000599	0.000468	0.00067	"	"	"	"	"	JB
Benzo(b)fluoranthene	0.000831	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	0.00124	0.000394	0.00067	"	"	"	"	"	
Fluorene	0.00121	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	0.00393	0.000484	0.00067	"	"	"	"	"	
Pyrene	0.0022	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	52.4 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	67.6 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	47.9 %		29-110			"	"	"	

pH in Soil by 9045D

pH	7.86			pH Units	1	B2B1008	02/10/2022	02/11/2022	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-S01@3'

2/9/2022 2:04:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-08 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2B0928	02/09/2022	02/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	84.7 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

Benzene	ND		0.00200	mg/kg	1	B2B0923	02/09/2022	02/10/2022	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %		70-130			"	"	"	
Surrogate: Toluene-d8	95.2 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %		70-130			"	"	"	

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	

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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-S01@3'

2/9/2022 2:04:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
 Y202191-08 (Soil)

PAH by 8270D SIM

Acenaphthene	ND	0.000304	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	0.000766	0.000468	0.00067	"	"	"	"	"	B
Benzo(b)fluoranthene	0.00095	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	0.000571	0.000394	0.00067	"	"	"	"	"	J
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	52.6 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	63.7 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	48 %		29-110			"	"	"	

pH in Soil by 9045D

pH	7.92		pH Units	1	B2B1008	02/10/2022	02/11/2022	
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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.

Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-E01@3'

2/9/2022 2:06:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202191-09 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2B0928	02/09/2022	02/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	105 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

Benzene	ND		0.00200	mg/kg	1	B2B0923	02/09/2022	02/10/2022	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %		70-130			"	"	"	
Surrogate: Toluene-d8	96.6 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %		70-130			"	"	"	

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-E01@3'

2/9/2022 2:06:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y202191-09 (Soil)

PAH by 8270D SIM

Acenaphthene	ND	0.000304	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	0.000859	0.000468	0.00067	"	"	"	"	"	B
Benzo(b)fluoranthene	0.00108	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	0.000445	0.000437	0.00067	"	"	"	"	"	J
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	0.000752	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	0.000813	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	51.7 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	63 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	47.7 %		29-110			"	"	"	

pH in Soil by 9045D

pH	7.88		pH Units	1	B2B1008	02/10/2022	02/11/2022	
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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-W01@3'
 2/9/2022 2:08:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y202191-10 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2B0928	02/09/2022	02/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl 104 % 50-150 " " "

GBTEX+TMBs by 8260D

Benzene	ND		0.00200	mg/kg	1	B2B0923	02/09/2022	02/10/2022	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "
 Surrogate: Toluene-d8 96.6 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 100 % 70-130 " " "

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-W01@3'
2/9/2022 2:08:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y202191-10 (Soil)

PAH by 8270D SIM

Acenaphthene	ND	0.000304	0.00067	mg/Kg	1	L599934	02/16/2022	02/17/2022	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	49.5 %		33-115			"	"	"
Surrogate: 4-Terphenyl-d14	62.8 %		33-122			"	"	"
Surrogate: Nitrobenzene-d5	46.8 %		29-110			"	"	"

pH in Soil by 9045D

pH	7.67			pH Units	1	B2B1008	02/10/2022	02/11/2022
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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B0923 - EPA 5030 (soil)

Blank (B2B0923-BLK1)

Prepared: 02/09/2022 Analyzed: 02/09/2022

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.0100	"							U
Toluene	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	95.7		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	98.2		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	101		70-130			

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 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B0923 - EPA 5030 (soil)

LCS (B2B0923-BS1)

Prepared: 02/09/2022 Analyzed: 02/09/2022

1,2,4-Trimethylbenzene	0.111	0.00200	mg/kg	0.100		111	70-130			
1,3,5-Trimethylbenzene	0.114	0.00200	"	0.100		114	70-130			
Benzene	0.106	0.00200	"	0.100		106	70-130			
Ethylbenzene	0.111	0.00200	"	0.100		111	70-130			
Naphthalene	0.0995	0.0100	"	0.100		99.5	70-130			
Toluene	0.106	0.00200	"	0.100		106	70-130			
o-Xylene	0.111	0.00200	"	0.100		111	70-130			
m,p-Xylene	0.223	0.00400	"	0.200		111	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		94.7	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B0923 - EPA 5030 (soil)

Matrix Spike (B2B0923-MS1)	Source: Y202178-02			Prepared: 02/09/2022 Analyzed: 02/09/2022						
1,2,4-Trimethylbenzene	0.730	0.00200	mg/kg	0.100	0.278	452	70-130			QM-07
1,3,5-Trimethylbenzene	0.390	0.00200	"	0.100	0.105	285	70-130			QM-07
Benzene	0.0870	0.00200	"	0.100	0.00148	85.5	70-130			
Ethylbenzene	0.195	0.00200	"	0.100	0.0411	154	70-130			QM-07
Naphthalene	0.181	0.0100	"	0.100	0.0341	147	70-130			QM-07
Toluene	0.230	0.00200	"	0.100	0.0690	161	70-130			QM-07
o-Xylene	0.621	0.00200	"	0.100	0.216	405	70-130			QM-07
m,p-Xylene	0.956	0.00400	"	0.200	0.398	279	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.17		"	0.125		133	70-130			S-04

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Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B0923 - EPA 5030 (soil)

Matrix Spike Dup (B2B0923-MSD1)	Source: Y202178-02		Prepared: 02/09/2022 Analyzed: 02/09/2022							
1,2,4-Trimethylbenzene	0.438	0.00200	mg/kg	0.100	0.278	160	70-130	50.0	20	QM-07
1,3,5-Trimethylbenzene	0.209	0.00200	"	0.100	0.105	104	70-130	60.4	20	QM-07
Benzene	0.0976	0.00200	"	0.100	0.00148	96.1	70-130	11.5	20	
Ethylbenzene	0.133	0.00200	"	0.100	0.0411	91.9	70-130	37.7	20	QM-07
Naphthalene	0.140	0.0100	"	0.100	0.0341	106	70-130	25.6	20	QM-07
Toluene	0.157	0.00200	"	0.100	0.0690	87.8	70-130	38.0	20	QM-07
o-Xylene	0.313	0.00200	"	0.100	0.216	96.4	70-130	66.1	20	QM-07
m,p-Xylene	0.585	0.00400	"	0.200	0.398	93.7	70-130	48.1	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		108	70-130			

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 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B0928 - EPA 3550B										
Blank (B2B0928-BLK1)										
					Prepared: 02/09/2022 Analyzed: 02/09/2022					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	24		"	24.9		96.5	50-150			

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 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B0928 - EPA 3550B

LCS (B2B0928-BS1)

Prepared: 02/09/2022 Analyzed: 02/09/2022

Diesel (C10-C28)	1100	50.0	mg/kg	1000		110	70-130			
Residual Range Organics (C28-C40)	925	200	"	1000		92.5	70-130			
Surrogate: o-Terphenyl	44		"	49.8		88.6	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B0928 - EPA 3550B

Matrix Spike (B2B0928-MS1)	Source: Y202191-01			Prepared: 02/09/2022 Analyzed: 02/10/2022						
Diesel (C10-C28)	1120	50.0	mg/kg	1000	ND	112	70-130			
Residual Range Organics (C28-C40)	940	200	"	1000	ND	94.0	70-130			
Surrogate: o-Terphenyl	48		"	49.8		97.2	50-150			

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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
Batch B2B0928 - EPA 3550B										
Matrix Spike Dup (B2B0928-MSD1)		Source: Y202191-01			Prepared: 02/09/2022 Analyzed: 02/10/2022					
Diesel (C10-C28)	1060	50.0	mg/kg	1000	ND	106	70-130	5.66	35	
Residual Range Organics (C28-C40)	885	200	"	1000	ND	88.5	70-130	6.08	35	
Surrogate: o-Terphenyl	51		"	49.8		103	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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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Saturated Paste - 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 B2B1008 - NO PREP

Duplicate (B2B1008-DUP1)

Source: Y202191-01

Prepared: 02/10/2022 Analyzed: 02/11/2022

pH	8.09		pH Units		8.30			2.56	25	
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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L599934 - 3550B

MSD (L 90285-MSD-L599934)		Source: Y202191-06			Prepared: 02/16/2022 Analyzed: 02/17/2022					
Naphthalene	0.0904	0.000484	mg/Kg	0.165	0.00483	51.8	30-130	7.1	30	
Indeno(1,2,3-cd)pyrene	0.1	0.000627	"	0.165	<0.000627	60.6	30-130	0	30	
Fluorene	0.104	0.000286	"	0.165	<0.000286	63	30-130	0.9	30	
Fluoranthene	0.113	0.000394	"	0.165	0.00112	67.8	30-130	0.8	30	
Dibenz(a,h)anthracene	0.103	0.000614	"	0.165	<0.000614	62.4	30-130	0.9	30	
Chrysene	0.107	0.000624	"	0.165	<0.000624	64.8	30-130	1.8	30	
1-Methylnaphthalene	0.106	0.000364	"	0.165	0.00854	59	30-130	15.5	30	
Benzo(a)pyrene	0.113	0.000468	"	0.165	0.000915	67.9	30-130	4.5	30	
Anthracene	0.105	0.000334	"	0.165	<0.000334	63.6	30-130	1.9	30	
Acenaphthene	0.0933	0.000304	"	0.165	<0.000304	56.5	30-130	4	30	
2-Methylnaphthalene	0.11	0.000645	"	0.165	0.0163	56.7	30-130	19.2	30	
Pyrene	0.111	0.000643	"	0.165	0.00121	66.5	30-130	0.9	30	
Benzo(b)fluoranthene	0.103	0.000585	"	0.165	0.000998	61.8	30-130	1.9	30	
Benzo(k)fluoranthene	0.103	0.000437	"	0.165	0.000452	62.4	30-130	6.2	30	
Benzo(a)anthracene	0.112	0.000493	"	0.165	<0.000493	67.8	30-130	0.8	30	
Surrogate: Nitrobenzene-d5	43.3		"	0.33	164	43.3	29-110			
Surrogate: 4-Terphenyl-d14	66.3		"	0.33	213	66.3	33-122			
Surrogate: 2-Fluorobiphenyl	47.8		"	0.33	180	47.8	33-115			

MS (L 90285-MS-L599934)		Source: Y202191-06			Prepared: 02/16/2022 Analyzed: 02/17/2022					
Anthracene	0.103	0.000334	mg/Kg	0.167	<0.000334	61.6	30-130			
Pyrene	0.11	0.000643	"	0.167	0.00121	65.1	30-130			
1-Methylnaphthalene	0.0907	0.000364	"	0.167	0.00854	49.1	30-130			
2-Methylnaphthalene	0.0907	0.000645	"	0.167	0.0163	44.5	30-130			
Acenaphthene	0.0972	0.000304	"	0.167	<0.000304	58.2	30-130			
Benzo(a)anthracene	0.113	0.000493	"	0.167	<0.000493	67.6	30-130			
Benzo(a)pyrene	0.108	0.000468	"	0.167	0.000915	64.1	30-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L599934 - 3550B

MS (L 90285-MS-L599934)	Source: Y202191-06			Prepared: 02/16/2022 Analyzed: 02/17/2022						
Naphthalene	0.0842	0.000484	mg/Kg	0.167	0.00483	47.5	30-130			
Benzo(k)fluoranthene	0.0968	0.000437	"	0.167	0.000452	57.9	30-130			
Chrysene	0.105	0.000624	"	0.167	<0.000624	62.8	30-130			
Dibenz(a,h)anthracene	0.104	0.000614	"	0.167	<0.000614	62.2	30-130			
Fluoranthene	0.112	0.000394	"	0.167	0.00112	66.3	30-130			
Fluorene	0.105	0.000286	"	0.167	<0.000286	62.8	30-130			
Indeno(1,2,3-cd)pyrene	0.1	0.000627	"	0.167	<0.000627	59.8	30-130			
Benzo(b)fluoranthene	0.105	0.000585	"	0.167	0.000998	62.2	30-130			
Surrogate: 2-Fluorobiphenyl	52.5		"	0.333	180	52.5	33-115			
Surrogate: 4-Terphenyl-d14	65.1		"	0.333	213	65.1	33-122			
Surrogate: Nitrobenzene-d5	46.8		"	0.333	164	46.8	29-110			

LCS (LCS-L599934)	Prepared: 02/16/2022 Analyzed: 02/17/2022									
Chrysene	0.116	0.000624	mg/Kg	0.167		69.4	30-130			
Dibenz(a,h)anthracene	0.107	0.000614	"	0.167		64	30-130			
Fluoranthene	0.122	0.000394	"	0.167		73	30-130			
Fluorene	0.117	0.000286	"	0.167		70	30-130			
Indeno(1,2,3-cd)pyrene	0.106	0.000627	"	0.167		63.4	30-130			
Pyrene	0.12	0.000643	"	0.167		71.8	30-130			
Benzo(k)fluoranthene	0.104	0.000437	"	0.167		62.2	30-130			
Naphthalene	0.097	0.000484	"	0.167		58	30-130			
Benzo(b)fluoranthene	0.116	0.000585	"	0.167		69.4	30-130			
Benzo(a)pyrene	0.116	0.000468	"	0.167		69.4	30-130			
Benzo(a)anthracene	0.114	0.000493	"	0.167		68.2	30-130			
Anthracene	0.114	0.000334	"	0.167		68.2	30-130			
Acenaphthene	0.108	0.000304	"	0.167		64.6	30-130			
2-Methylnaphthalene	0.102	0.000645	"	0.167		61	30-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L599934 - 3550B

LCS (LCS-L599934)

Prepared: 02/16/2022 Analyzed: 02/17/2022

1-Methylnaphthalene	0.102	0.000364	mg/Kg	0.167		61	30-130			
Surrogate: 4-Terphenyl-d14	69.9		"	0.333		69.9	33-122			
Surrogate: Nitrobenzene-d5	53.4		"	0.333		53.4	29-110			
Surrogate: 2-Fluorobiphenyl	64.5		"	0.333		64.5	33-115			

LRB (LRB-L599934)

Prepared: 02/16/2022 Analyzed: 02/17/2022

Acenaphthene	ND	0.00067	mg/Kg				-			
Fluoranthene	ND	0.00067	"				-			
Naphthalene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00067	"				-			
Fluorene	ND	0.00067	"				-			
1-Methylnaphthalene	ND	0.00067	"				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Chrysene	ND	0.00067	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Pyrene	ND	0.00067	"				-			
Benzo(a)pyrene	0.000596	0.00067	"				-			J
Benzo(a)anthracene	ND	0.00067	"				-			
Anthracene	ND	0.00067	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Indeno(1,2,3-cd)pyrene	ND	0.00067	"				-			
Surrogate: Nitrobenzene-d5	52.2		"	0.333		52.2	29-110			
Surrogate: 4-Terphenyl-d14	68.1		"	0.333		68.1	33-122			
Surrogate: 2-Fluorobiphenyl	62.4		"	0.333		62.4	33-115			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L599814 - 3550B

MSD (L 89594-MSD-L599814)		Source: 89594			Prepared: 02/16/2022 Analyzed: 02/17/2022					
1-Methylnaphthalene	0.0779	0.000364	mg/Kg	0.166	<0.000364	46.9	30-130	2	30	
Benzo(b)fluoranthene	0.0838	0.000585	"	0.166	<0.000585	50.4	30-130	4.5	30	
Benzo(a)anthracene	0.0994	0.000493	"	0.166	<0.000493	59.8	30-130	1.3	30	
Anthracene	0.0894	0.000334	"	0.166	<0.000334	53.8	30-130	0.8	30	
Acenaphthene	0.0741	0.000304	"	0.166	<0.000304	44.6	30-130	3.9	30	
Benzo(k)fluoranthene	0.0834	0.000437	"	0.166	<0.000437	50.2	30-130	9	30	
2-Methylnaphthalene	0.0766	0.000645	"	0.166	<0.000645	46.1	30-130	2.4	30	
Benzo(a)pyrene	0.109	0.000468	"	0.166	<0.000468	65.6	30-130	2.7	30	
Chrysene	0.105	0.000624	"	0.166	<0.000624	63.2	30-130	0.9	30	
Pyrene	0.0972	0.000643	"	0.166	<0.000643	58.5	30-130	0.7	30	
Naphthalene	0.0803	0.000484	"	0.166	<0.000484	48.3	30-130	0.9	30	
Indeno(1,2,3-cd)pyrene	0.0848	0.000627	"	0.166	<0.000627	51	30-130	8	30	
Fluorene	0.0843	0.000286	"	0.166	<0.000286	50.7	30-130	3	30	
Fluoranthene	0.0992	0.000394	"	0.166	<0.000394	59.7	30-130	0.6	30	
Dibenz(a,h)anthracene	0.0992	0.000614	"	0.166	<0.000614	59.7	30-130	7.5	30	
Surrogate: 4-Terphenyl-d14	69.1		"	0.331	206	69.1	33-122			
Surrogate: 2-Fluorobiphenyl	52.8		"	0.331	162	52.8	33-115			
Surrogate: Nitrobenzene-d5	53.4		"	0.331	157	53.4	29-110			

MS (L 89594-MS-L599814)		Source: 89594			Prepared: 02/16/2022 Analyzed: 02/17/2022					
Fluoranthene	0.0986	0.000394	mg/Kg	0.163	<0.000394	60.4	30-130			
Benzo(b)fluoranthene	0.0801	0.000585	"	0.163	<0.000585	49.1	30-130			
Naphthalene	0.0811	0.000484	"	0.163	<0.000484	49.7	30-130			
Fluorene	0.0869	0.000286	"	0.163	<0.000286	53.3	30-130			
Dibenz(a,h)anthracene	0.107	0.000614	"	0.163	<0.000614	65.6	30-130			
Chrysene	0.104	0.000624	"	0.163	<0.000624	63.8	30-130			
Benzo(k)fluoranthene	0.0913	0.000437	"	0.163	<0.000437	56	30-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L599814 - 3550B

MS (L 89594-MS-L599814)	Source: 89594		Prepared: 02/16/2022 Analyzed: 02/17/2022							
Pyrene	0.0965	0.000643	mg/Kg	0.163	<0.000643	59.2	30-130			
Benzo(a)anthracene	0.0981	0.000493	"	0.163	<0.000493	60.1	30-130			
Anthracene	0.0886	0.000334	"	0.163	<0.000334	54.3	30-130			
Acenaphthene	0.0771	0.000304	"	0.163	<0.000304	47.3	30-130			
1-Methylnaphthalene	0.0795	0.000364	"	0.163	<0.000364	48.7	30-130			
Indeno(1,2,3-cd)pyrene	0.0919	0.000627	"	0.163	<0.000627	56.3	30-130			
2-Methylnaphthalene	0.0785	0.000645	"	0.163	<0.000645	48.1	30-130			
Benzo(a)pyrene	0.106	0.000468	"	0.163	<0.000468	65	30-130			
Surrogate: Nitrobenzene-d5	48.1		"	0.326	157	48.1	29-110			
Surrogate: 4-Terphenyl-d14	61.3		"	0.326	206	61.3	33-122			
Surrogate: 2-Fluorobiphenyl	49.6		"	0.326	162	49.6	33-115			

LCS (LCS-L599814)	Prepared: 02/16/2022 Analyzed: 02/17/2022									
Fluorene	0.0915	0.000286	mg/Kg	0.167		54.7	30-130			
Benzo(b)fluoranthene	0.0884	0.000585	"	0.167		52.9	30-130			
Benzo(k)fluoranthene	0.0917	0.000437	"	0.167		54.9	30-130			
Chrysene	0.107	0.000624	"	0.167		64	30-130			
Benzo(a)pyrene	0.113	0.000468	"	0.167		67.6	30-130			
Fluoranthene	0.104	0.000394	"	0.167		62.2	30-130			
Indeno(1,2,3-cd)pyrene	0.0936	0.000627	"	0.167		56	30-130			
Naphthalene	0.0898	0.000484	"	0.167		53.7	30-130			
Dibenz(a,h)anthracene	0.11	0.000614	"	0.167		65.8	30-130			
Benzo(a)anthracene	0.105	0.000493	"	0.167		62.8	30-130			
Anthracene	0.0946	0.000334	"	0.167		56.6	30-130			
2-Methylnaphthalene	0.087	0.000645	"	0.167		52	30-130			
1-Methylnaphthalene	0.0882	0.000364	"	0.167		52.8	30-130			
Pyrene	0.102	0.000643	"	0.167		61	30-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L599814 - 3550B

LCS (LCS-L599814)

Prepared: 02/16/2022 Analyzed: 02/17/2022

Acenaphthene	0.0837	0.000304	mg/Kg	0.167		50.1	30-130			
Surrogate: 4-Terphenyl-d14	67.5		"	0.333		67.5	33-122			
Surrogate: 2-Fluorobiphenyl	57		"	0.333		57	33-115			
Surrogate: Nitrobenzene-d5	54.3		"	0.333		54.3	29-110			

LRB (LRB-L599814)

Prepared: 02/16/2022 Analyzed: 02/17/2022

Pyrene	ND	0.00067	mg/Kg				-			
Benzo(a)pyrene	ND	0.00067	"				-			
1-Methylnaphthalene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
Benzo(a)anthracene	ND	0.00067	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Chrysene	ND	0.00067	"				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Fluoranthene	ND	0.00067	"				-			
Fluorene	ND	0.00067	"				-			
Indeno(1,2,3-cd)pyrene	ND	0.00067	"				-			
Naphthalene	ND	0.00067	"				-			
Anthracene	ND	0.00067	"				-			
Surrogate: 2-Fluorobiphenyl	55.8		"	0.333		55.8	33-115			
Surrogate: 4-Terphenyl-d14	64.2		"	0.333		64.2	33-122			
Surrogate: Nitrobenzene-d5	52.2		"	0.333		52.2	29-110			

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

Total Metals by 6020B - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L599214 - 3050B										
MSD (L 90284-MSD-L599214)			Source: Y202191-05		Prepared: 02/14/2022 Analyzed: 02/16/2022					
Barium	56	0.042	mg/Kg	4.81	48.2	162	75-125	4.1	80	*
MS (L 90284-MS-L599214)			Source: Y202191-05		Prepared: 02/14/2022 Analyzed: 02/16/2022					
Barium	53.7	0.042	mg/Kg	4.76	48.2	116	75-125			
LCS (LCS-L599214)					Prepared: 02/14/2022 Analyzed: 02/16/2022					
Barium	4.9	0.042	mg/Kg	5		98	80-120			
LRB (LRB-L599214)					Prepared: 02/14/2022 Analyzed: 02/16/2022					
Barium	0.0923	0.25	mg/Kg				-			J

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Tasman Geosciences
6855 West 119th Avenue
Broomfield CO 80020

Mike Jahn
Project Number: 90434318
Project: KMG - Sawdey 5-30

Notes and Definitions

- U Sample is Non-Detect.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- JB [Undefined]
- J Estimated Value. Analyte below reported quantitation limit.
- B Analyte detected in associated method blank.
- * QC Failure
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported on a wet weight basis.

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.

March 02, 2022

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

Project Name - KMG - Sawdey 5-30

Project Number - 90434318

Attached are your analytical results for KMG - Sawdey 5-30 received by Origins Laboratory, Inc. February 23, 2022. This project is associated with Origins project number Y202511-01.

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



Tasman Geosciences
6855 West 119th Avenue
Broomfield CO 80020

Mike Jahn
Project Number: 90434318
Project: KMG - Sawdey 5-30

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL-B04@5'	Y202511-01	Soil	February 23, 2022 9:34	02/23/2022 15:53
FL-N02@4'	Y202511-02	Soil	February 23, 2022 9:36	02/23/2022 15:53

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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

Sample Receipt Checklist

Origins Work Order: Y202511 Client: Tasman
 Client Project ID: Sawdey 5-30

Checklist Completed by: SG Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Date/time completed: 2/23/22 Airbill #: N/A

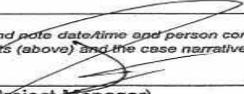
Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
(Describe)

Cooler Number/Temperature: 1 2.8 °C _____ °C _____ °C

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⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" 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"/>		
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"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> 1/4 inch bubble) present? If yes, contact client and note in narrative.			<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"/>	
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 be taken in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) 

Date/Time Reviewed 2/23/22

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-B04@5'

2/23/2022 9:34:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202511-01 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2B2302	02/23/2022	02/23/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	72.8 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2B2325	02/23/2022	02/23/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	0.664		0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	106 %		70-130			"	"	"	
Surrogate: Toluene-d8	97.7 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %		70-130			"	"	"	

PAH by 8270D SIM

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-B04@5'

2/23/2022 9:34:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
 Y202511-01 (Soil)

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.00182	0.00335	mg/Kg	5	L601848	02/28/2022	02/28/2022	
2-Methylnaphthalene	ND	0.00323	0.00335	"	"	"	"	"	
Acenaphthene	ND	0.00152	0.00335	"	"	"	"	"	
Anthracene	ND	0.00167	0.00335	"	"	"	"	"	
Benzo(a)anthracene	ND	0.00247	0.00335	"	"	"	"	"	
Benzo(a)pyrene	ND	0.00234	0.00335	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.00293	0.00335	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.00219	0.00335	"	"	"	"	"	
Chrysene	ND	0.00312	0.00335	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.00307	0.00335	"	"	"	"	"	
Fluoranthene	ND	0.00197	0.00335	"	"	"	"	"	
Fluorene	ND	0.00143	0.00335	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.00314	0.00335	"	"	"	"	"	
Naphthalene	ND	0.00242	0.00335	"	"	"	"	"	
Pyrene	ND	0.00322	0.00335	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	62.6 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	77.9 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	56.4 %	29-110	"	"	"

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-N02@4'

2/23/2022 9:36:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y202511-02 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2B2302	02/23/2022	02/23/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl 79.5 % 50-150 " " "

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2B2325	02/23/2022	02/23/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 106 % 70-130 " " "
Surrogate: Toluene-d8 97.5 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

PAH by 8270D SIM

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

FL-N02@4'

2/23/2022 9:36:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y202511-02 (Soil)

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L601848	02/28/2022	02/28/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	0.000348	0.000304	0.00067	"	"	"	"	"	J
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	0.00108	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	56.1 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	63.9 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	52.4 %		29-110			"	"	"	

Origins Laboratory, Inc.



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Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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
Batch B2B2302 - EPA 3550B										
Blank (B2B2302-BLK1)										
					Prepared: 02/23/2022 Analyzed: 02/23/2022					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	22		"	24.9		89.7	50-150			

Origins Laboratory, Inc.



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Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B2302 - EPA 3550B

LCS (B2B2302-BS1)

Prepared: 02/23/2022 Analyzed: 02/23/2022

Diesel (C10-C28)	473	25.0	mg/kg	500		94.6	70-130			
Residual Range Organics (C28-C40)	419	100	"	500		83.8	70-130			
Surrogate: o-Terphenyl	22		"	24.9		88.2	50-150			

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Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B2302 - EPA 3550B

Matrix Spike (B2B2302-MS1)	Source: Y202203-01			Prepared: 02/23/2022 Analyzed: 02/23/2022						
Diesel (C10-C28)	416	25.0	mg/kg	500	ND	83.1	70-130			
Residual Range Organics (C28-C40)	375	100	"	500	ND	75.0	70-130			
Surrogate: o-Terphenyl	19		"	24.9		74.9	50-150			

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 Project: KMG - Sawdey 5-30

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 B2B2302 - EPA 3550B

Matrix Spike Dup (B2B2302-MSD1)	Source: Y202203-01			Prepared: 02/23/2022 Analyzed: 02/23/2022						
Diesel (C10-C28)	448	25.0	mg/kg	500	ND	89.6	70-130	7.44	35	
Residual Range Organics (C28-C40)	393	100	"	500	ND	78.6	70-130	4.70	35	
<i>Surrogate: o-Terphenyl</i>	<i>20</i>		<i>"</i>	<i>24.9</i>		<i>81.7</i>	<i>50-150</i>			

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Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B2325 - EPA 5030 (soil)

Blank (B2B2325-BLK1)

Prepared: 02/23/2022 Analyzed: 02/23/2022

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.0100	"							U
Toluene	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	105		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	98.0		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	101		70-130			

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Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B2325 - EPA 5030 (soil)

LCS (B2B2325-BS1)

Prepared: 02/23/2022 Analyzed: 02/23/2022

1,2,4-Trimethylbenzene	0.0932	0.00200	mg/kg	0.100		93.2	70-130			
1,3,5-Trimethylbenzene	0.0942	0.00200	"	0.100		94.2	70-130			
Benzene	0.0890	0.00200	"	0.100		89.0	70-130			
Ethylbenzene	0.0870	0.00200	"	0.100		87.0	70-130			
Naphthalene	0.103	0.0100	"	0.100		103	70-130			
Toluene	0.0861	0.00200	"	0.100		86.1	70-130			
o-Xylene	0.0902	0.00200	"	0.100		90.2	70-130			
m,p-Xylene	0.175	0.00400	"	0.200		87.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		106	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

Origins Laboratory, Inc.



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Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B2325 - EPA 5030 (soil)

Matrix Spike (B2B2325-MS1)	Source: Y202504-01			Prepared: 02/23/2022 Analyzed: 02/23/2022						
1,2,4-Trimethylbenzene	0.0797	0.00200	mg/kg	0.100	0.000480	79.2	70-130			
1,3,5-Trimethylbenzene	0.0801	0.00200	"	0.100	ND	80.1	70-130			
Benzene	0.0827	0.00200	"	0.100	ND	82.7	70-130			
Ethylbenzene	0.0766	0.00200	"	0.100	ND	76.6	70-130			
Naphthalene	0.0917	0.0100	"	0.100	0.00468	87.1	70-130			
Toluene	0.0793	0.00200	"	0.100	ND	79.3	70-130			
o-Xylene	0.0798	0.00200	"	0.100	ND	79.8	70-130			
m,p-Xylene	0.152	0.00400	"	0.200	ND	75.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		108	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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 B2B2325 - EPA 5030 (soil)

Matrix Spike Dup (B2B2325-MSD1)	Source: Y202504-01			Prepared: 02/23/2022 Analyzed: 02/23/2022						
1,2,4-Trimethylbenzene	0.0761	0.00200	mg/kg	0.100	0.000480	75.6	70-130	4.60	20	
1,3,5-Trimethylbenzene	0.0757	0.00200	"	0.100	ND	75.7	70-130	5.68	20	
Benzene	0.0778	0.00200	"	0.100	ND	77.8	70-130	6.10	20	
Ethylbenzene	0.0718	0.00200	"	0.100	ND	71.8	70-130	6.44	20	
Naphthalene	0.0913	0.0100	"	0.100	0.00468	86.6	70-130	0.503	20	
Toluene	0.0739	0.00200	"	0.100	ND	73.9	70-130	7.15	20	
o-Xylene	0.0757	0.00200	"	0.100	ND	75.7	70-130	5.25	20	
m,p-Xylene	0.143	0.00400	"	0.200	ND	71.4	70-130	6.19	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		109	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

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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PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L601848 - 3550B

MSD (L 97515-MSD-L601848)	Source: 97515		Prepared: 02/28/2022 Analyzed: 02/28/2022							
Benzo(a)pyrene	0.113	0.000468	mg/Kg	0.166	0.00288	66.3	30-130	7.6	30	
1-Methylnaphthalene	0.0932	0.000364	"	0.166	0.00211	54.8	30-130	4.7	30	
2-Methylnaphthalene	0.093	0.000645	"	0.166	0.00208	54.7	30-130	4.6	30	
Acenaphthene	0.0975	0.000304	"	0.166	0.00192	57.5	30-130	4.5	30	
Anthracene	0.1	0.000334	"	0.166	0.0021	58.9	30-130	5.8	30	
Benzo(b)fluoranthene	0.106	0.000585	"	0.166	0.002	62.6	30-130	2.7	30	
Pyrene	0.105	0.000643	"	0.166	0.00237	61.8	30-130	8.2	30	
Naphthalene	0.0917	0.000484	"	0.166	0.00213	53.9	30-130	3.1	30	
Indeno(1,2,3-cd)pyrene	0.111	0.000627	"	0.166	0.00254	65.3	30-130	6.5	30	
Fluorene	0.101	0.000286	"	0.166	0.00222	59.5	30-130	6.6	30	
Fluoranthene	0.051	0.000394	"	0.166	0.00164	29.7	30-130	10.2	30	*
Dibenz(a,h)anthracene	0.111	0.000614	"	0.166	0.00267	65.2	30-130	1.8	30	
Chrysene	0.101	0.000624	"	0.166	0.00208	59.5	30-130	3.8	30	
Benzo(k)fluoranthene	0.0914	0.000437	"	0.166	0.0021	53.7	30-130	0.3	30	
Benzo(a)anthracene	0.101	0.000493	"	0.166	0.00239	59.4	30-130	6.6	30	
Surrogate: 2-Fluorobiphenyl	64.3		"	0.331	205	64.3	33-115			
Surrogate: 4-Terphenyl-d14	67		"	0.331	216	67	33-122			
Surrogate: Nitrobenzene-d5	58.6		"	0.331	188	58.6	29-110			

MS (L 97515-MS-L601848)	Source: 97515		Prepared: 02/28/2022 Analyzed: 02/28/2022							
Benzo(a)pyrene	0.122	0.000468	mg/Kg	0.166	0.00288	71.7	30-130			
Chrysene	0.105	0.000624	"	0.166	0.00208	62	30-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L601848 - 3550B

MS (L 97515-MS-L601848)	Source: 97515			Prepared: 02/28/2022 Analyzed: 02/28/2022						
Pyrene	0.114	0.000643	mg/Kg	0.166	0.00237	67.2	30-130			
Naphthalene	0.0946	0.000484	"	0.166	0.00213	55.7	30-130			
Indeno(1,2,3-cd)pyrene	0.104	0.000627	"	0.166	0.00254	61.1	30-130			
Fluorene	0.108	0.000286	"	0.166	0.00222	63.7	30-130			
Fluoranthene	0.0565	0.000394	"	0.166	0.00164	33	30-130			
Dibenz(a,h)anthracene	0.109	0.000614	"	0.166	0.00267	64	30-130			
Benzo(b)fluoranthene	0.109	0.000585	"	0.166	0.002	64.4	30-130			
Benzo(a)anthracene	0.108	0.000493	"	0.166	0.00239	63.6	30-130			
Anthracene	0.106	0.000334	"	0.166	0.0021	62.5	30-130			
Acenaphthene	0.102	0.000304	"	0.166	0.00192	60.2	30-130			
2-Methylnaphthalene	0.0974	0.000645	"	0.166	0.00208	57.4	30-130			
1-Methylnaphthalene	0.0977	0.000364	"	0.166	0.00211	57.5	30-130			
Benzo(k)fluoranthene	0.0917	0.000437	"	0.166	0.0021	53.9	30-130			
Surrogate: Nitrobenzene-d5	59.6		"	0.332	188	59.6	29-110			
Surrogate: 2-Fluorobiphenyl	66.2		"	0.332	205	66.2	33-115			
Surrogate: 4-Terphenyl-d14	71.3		"	0.332	216	71.3	33-122			

LCS (LCS-L601848)				Prepared: 02/28/2022 Analyzed: 02/28/2022						
Dibenz(a,h)anthracene	0.147	0.000614	mg/Kg	0.167		88	30-130			
Fluoranthene	0.124	0.000394	"	0.167		74.2	30-130			
Fluorene	0.117	0.000286	"	0.167		70	30-130			
Indeno(1,2,3-cd)pyrene	0.142	0.000627	"	0.167		85	30-130			
Naphthalene	0.102	0.000484	"	0.167		61	30-130			
Pyrene	0.124	0.000643	"	0.167		74.2	30-130			
Chrysene	0.12	0.000624	"	0.167		71.8	30-130			
1-Methylnaphthalene	0.106	0.000364	"	0.167		63.4	30-130			
Benzo(b)fluoranthene	0.135	0.000585	"	0.167		80.8	30-130			

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L601848 - 3550B

LCS (LCS-L601848)

Prepared: 02/28/2022 Analyzed: 02/28/2022

Benzo(a)pyrene	0.132	0.000468	mg/Kg	0.167		79	30-130			
Benzo(a)anthracene	0.123	0.000493	"	0.167		73.6	30-130			
Acenaphthene	0.11	0.000304	"	0.167		65.8	30-130			
2-Methylnaphthalene	0.106	0.000645	"	0.167		63.4	30-130			
Anthracene	0.117	0.000334	"	0.167		70	30-130			
Benzo(k)fluoranthene	0.12	0.000437	"	0.167		71.8	30-130			
Surrogate: 4-Terphenyl-d14	76.5		"	0.333		76.5	33-122			
Surrogate: Nitrobenzene-d5	65.1		"	0.333		65.1	29-110			
Surrogate: 2-Fluorobiphenyl	70.8		"	0.333		70.8	33-115			

LRB (LRB-L601848)

Prepared: 02/28/2022 Analyzed: 02/28/2022

Chrysene	ND	0.00067	mg/Kg				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Fluoranthene	ND	0.00067	"				-			
Fluorene	ND	0.00067	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Naphthalene	ND	0.00067	"				-			
Indeno(1,2,3-cd)pyrene	ND	0.00067	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Benzo(a)pyrene	ND	0.00067	"				-			
Benzo(a)anthracene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00067	"				-			
1-Methylnaphthalene	ND	0.00067	"				-			
Pyrene	ND	0.00067	"				-			
Anthracene	ND	0.00067	"				-			
Surrogate: 4-Terphenyl-d14	72		"	0.333		72	33-122			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90434318
 Project: KMG - Sawdey 5-30

PAH by 8270D SIM - Quality Control
Waypoint Analytical, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L601848 - 3550B

LRB (LRB-L601848)

Prepared: 02/28/2022 Analyzed: 02/28/2022

Surrogate: Nitrobenzene-d5	64.8		mg/Kg	0.333	64.8		29-110			
Surrogate: 2-Fluorobiphenyl	69		"	0.333	69		33-115			

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Tasman Geosciences
6855 West 119th Avenue
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Mike Jahn
Project Number: 90434318
Project: KMG - Sawdey 5-30

Notes and Definitions

- U Sample is Non-Detect.
- J Estimated Value. Analyte below reported quantitation limit.
- * QC Failure
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported on a wet weight basis.

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