

September 20, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Bryant 9&34-30A O SA
Facility**

Project Number - 90428052

Attached are your analytical results for KMG - Bryant 9&34-30A O SA Facility received by Origins Laboratory, Inc. September 14, 2021. This project is associated with Origins project number Y109259-01.

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: 90428052
Project: KMG - Bryant 9&34-30A O SA Facility

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST-B02@3"	Y109259-01	Soil	September 14, 2021 14:25	09/14/2021 15:48
AST-B03@3"	Y109259-02	Soil	September 14, 2021 11:10	09/14/2021 15:48
AST-B06@3"	Y109259-03	Soil	September 14, 2021 14:16	09/14/2021 15:48
AST-B07@3"	Y109259-04	Soil	September 14, 2021 11:18	09/14/2021 15:48
AST-B09@3"	Y109259-05	Soil	September 14, 2021 14:00	09/14/2021 15:48
AST-B11@3"	Y109259-06	Soil	September 14, 2021 11:41	09/14/2021 15:48
AST-B13@3"	Y109259-07	Soil	September 14, 2021 12:15	09/14/2021 15:48
AST-BG01@3"	Y109259-08	Soil	September 14, 2021 14:30	09/14/2021 15:48
AST-BG02@3"	Y109259-09	Soil	September 14, 2021 14:32	09/14/2021 15:48
AST-BG03@3"	Y109259-10	Soil	September 14, 2021 14:34	09/14/2021 15:48
AST-BG04@3"	Y109259-11	Soil	September 14, 2021 14:36	09/14/2021 15:48

Origins Laboratory, Inc.



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Tasman Geosciences
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 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility



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4109259

page 1 of 2

Client: OXY-TASMAN
 Address: _____
 Project Manager: Mike Jahn
 Project Name: Bryant 9&34-30A O SA Facility
 Project Number: 90428052
 Telephone Number: _____
 Email Address: mjahn@tasman-geo.com
 Samples Collected By: JK

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 Sample #	Other	PH*	TC*	SAR*	Boron**		GBTEXN
AST-B0203"	9-14-21	1425	1	X						X							#saturated paste 1
AST-B0303"		1110															** hot water 2
AST-B0603"		1416															
AST-B0703"		1118															
AST-B0903"		1400															
AST-B1103"		1141															
AST-B1303"		1215															updated per the
AST-BG0103"		1430															phone call from
AST-BG0203"		1432															ERCON 9/15/20
AST-BG0303"		1434															
Relinquished by: <u>Steve Way</u>	Date: <u>9-14-21</u>	Time: <u>1548</u>	Time: <u>1548</u>	Received By: <u>[Signature]</u>	Date: <u>9/14/21</u>	Time: <u>1548</u>	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"/>										

Date Results Needed

Temp received: 65

Origins Laboratory, Inc.

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 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y109259

Client: Tasman

Client Project ID: Bryant 9+34-30A

Checklist Completed by: JG

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

Date/time completed: 9/14/21

Airbill #: N/A

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

Water Other:

Cooler Number/Temperature: 1,65 °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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Some Dry</u>
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments above and the case narrative.

Reviewed by (Project Manager)

9/14/21
 Date/Time Reviewed

Origins Laboratory, Inc.

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-B02@3"

9/14/2021 2:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-01 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B111430	AJP	09/14/2021	09/14/2021	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	AJP	"	"	U

Surrogate: *o*-Terphenyl 74.9 % 50-150 " " "

GBTEX+TMBs

Naphthalene	ND	0.00380	mg/kg	1	B111429	KDK	09/14/2021	09/14/2021	U
Benzene	ND	0.00200	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	KDK	"	"	U
Toluene	ND	0.00200	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.00200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 117 % 70-130 " " "
 Surrogate: Toluene-d8 98.7 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

Origins Laboratory, Inc.



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Tasman Geosciences
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 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-B03@3"

9/14/2021 11:10:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-02 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B111430	AJP	09/14/2021	09/14/2021	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	AJP	"	"	U

Surrogate: *o*-Terphenyl 87.0 % 50-150 " " "

GBTEX+TMBs

Naphthalene	ND	0.00380	mg/kg	1	B111429	KDK	09/14/2021	09/14/2021	U
Benzene	ND	0.00200	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	KDK	"	"	U
Toluene	ND	0.00200	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.00200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 116 % 70-130 " " "
 Surrogate: Toluene-d8 97.8 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

Origins Laboratory, Inc.



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Tasman Geosciences
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 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-B06@3"

9/14/2021 2:16:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-03 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B111430	AJP	09/14/2021	09/14/2021	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	AJP	"	"	U

Surrogate: *o*-Terphenyl 79.1 % 50-150 " " "

GBTEX+TMBs

Naphthalene	ND	0.00380	mg/kg	1	B111429	KDK	09/14/2021	09/14/2021	U
Benzene	ND	0.00200	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	KDK	"	"	U
Toluene	ND	0.00200	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.00200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 119 % 70-130 " " "
 Surrogate: Toluene-d8 97.5 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
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Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-B07@3"

9/14/2021 11:18:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-04 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	74.8	25.0	mg/kg	1	B111430	AJP	09/14/2021	09/14/2021	
Residual Range Organics (C28-C40)	ND	100	"	"	"	AJP	"	"	U

Surrogate: o-Terphenyl 82.7 % 50-150 " " "

GBTEX+TMBs

Naphthalene	ND	0.00380	mg/kg	1	B111429	KDK	09/14/2021	09/14/2021	U
Benzene	ND	0.00200	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	KDK	"	"	U
Toluene	ND	0.00200	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.00200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 121 % 70-130 " " "
 Surrogate: Toluene-d8 97.2 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-B09@3"

9/14/2021 2:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-05 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B111430	AJP	09/14/2021	09/14/2021	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	AJP	"	"	U

Surrogate: *o*-Terphenyl 79.0 % 50-150 " " "

GBTEX+TMBs

Naphthalene	ND	0.00380	mg/kg	1	B111429	KDK	09/14/2021	09/14/2021	U
Benzene	ND	0.00200	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	KDK	"	"	U
Toluene	ND	0.00200	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.00200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 125 % 70-130 " " "
 Surrogate: Toluene-d8 96.7 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

Origins Laboratory, Inc.



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Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-B11@3"
9/14/2021 11:41:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-06 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	381	25.0	mg/kg	1	B111430	AJP	09/14/2021	09/14/2021	
Residual Range Organics (C28-C40)	563	100	"	"	"	AJP	"	"	

Surrogate: *o*-Terphenyl 94.4 % 50-150 " " "

GBTEX+TMBs

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B111429	KDK	09/14/2021	09/14/2021	U
Naphthalene	ND	0.00380	"	"	"	KDK	"	"	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	KDK	"	"	U
Benzene	ND	0.00200	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	KDK	"	"	U
Toluene	ND	0.00200	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.00200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 123 % 70-130 " " "
 Surrogate: Toluene-d8 95.7 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

Origins Laboratory, Inc.



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Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-B11@3"
9/14/2021 11:41:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-06 (Soil)

Boron (DTPA Sorbitol)

Boron	0.259	0.199	mg/L	1	B111601	KAP	09/16/2021	09/16/2021	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	381	25.0	mg/kg	1	B111430	AJP	09/14/2021	09/14/2021	
Residual Range Organics (C28-C40)	563	100	"	"	"	AJP	"	"	

Surrogate: o-Terphenyl	94.4 %	50-150			"	"	"	"	
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GBTEX+TMBs

Naphthalene	ND	0.00380	mg/kg	1	B111429	KDK	09/14/2021	09/14/2021	U
Benzene	ND	0.00200	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	KDK	"	"	U
Toluene	ND	0.00200	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.00200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	123 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	95.7 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"	"	

Metals by Saturated Paste

Calcium	3.33	0.499	meq/L	10	[CALC]	KAP	09/16/2021	09/16/2021	
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 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-B11@3"

9/14/2021 11:41:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-06 (Soil)

Metals by Saturated Paste

Magnesium	1.15	0.823	meq/L	10	[CALC]	KAP	09/16/2021	09/16/2021	
Sodium	1.39	0.435	"	"	"	KAP	"	"	

pH in Soil by 9045D

pH	7.39		pH Units	1	B111603	JSM	09/16/2021	09/16/2021	
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SAR by 20B Saturated Paste

SAR	0.929		SAR	10	B111609	KAP	09/16/2021	09/16/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.553	0.00500	mmhos/cm	1	B111606	JSM	09/16/2021	09/16/2021	
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 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-B13@3"
9/14/2021 12:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-07 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B111430	AJP	09/14/2021	09/14/2021	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	AJP	"	"	U

Surrogate: *o*-Terphenyl 82.5 % 50-150 " " "

GBTEX+TMBs

Naphthalene	ND	0.00380	mg/kg	1	B111429	KDK	09/14/2021	09/14/2021	U
Benzene	ND	0.00200	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	KDK	"	"	U
Toluene	ND	0.00200	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.00200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 126 % 70-130 " " "
 Surrogate: Toluene-d8 96.8 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

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 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-BG01@3"
9/14/2021 2:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-08 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.198	mg/L	1	B111501	KAP	09/15/2021	09/15/2021	
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Metals by Saturated Paste

Calcium	1.95	0.499	meq/L	10	[CALC]	KAP	09/15/2021	09/15/2021	
Magnesium	0.913	0.823	"	"	"	KAP	"	"	
Sodium	ND	0.435	"	"	"	KAP	"	"	

pH in Soil by 9045D

pH	7.61		pH Units	1	B111506	JSM	09/15/2021	09/15/2021	
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SAR by 20B Saturated Paste

SAR	0.127		SAR	1	B111519	KAP	09/15/2021	09/15/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.339	0.00500	mmhos/cm	1	B111505	JSM	09/15/2021	09/15/2021	
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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: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-BG02@3"
9/14/2021 2:32:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-09 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.199	mg/L	1	B111501	KAP	09/15/2021	09/15/2021	
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Metals by Saturated Paste

Calcium	2.03	0.499	meq/L	10	[CALC]	KAP	09/15/2021	09/15/2021	
Magnesium	ND	0.823	"	"	"	KAP	"	"	
Sodium	0.465	0.435	"	"	"	KAP	"	"	

pH in Soil by 9045D

pH	7.99		pH Units	1	B111506	JSM	09/15/2021	09/15/2021	
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SAR by 20B Saturated Paste

SAR	0.397		SAR	1	B111519	KAP	09/15/2021	09/15/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.367	0.00500	mmhos/cm	1	B111505	JSM	09/15/2021	09/15/2021	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-BG03@3"
9/14/2021 2:34:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-10 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.199	mg/L	1	B111501	KAP	09/15/2021	09/15/2021	
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Metals by Saturated Paste

Calcium	1.43	0.499	meq/L	10	[CALC]	KAP	09/15/2021	09/15/2021	
Magnesium	ND	0.823	"	"	"	KAP	"	"	
Sodium	ND	0.435	"	"	"	KAP	"	"	

pH in Soil by 9045D

pH	7.80		pH Units	1	B111506	JSM	09/15/2021	09/15/2021	
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SAR by 20B Saturated Paste

SAR	0.230		SAR	1	B111519	KAP	09/15/2021	09/15/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.268	0.00500	mmhos/cm	1	B111505	JSM	09/15/2021	09/15/2021	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-BG04@3"
9/14/2021 2:36:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y109259-11 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.198	mg/L	1	B111501	KAP	09/15/2021	09/15/2021	
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Metals by Saturated Paste

Calcium	1.05	0.499	meq/L	10	[CALC]	KAP	09/17/2021	09/17/2021	
Magnesium	ND	0.823	"	"	"	KAP	"	"	
Sodium	ND	0.435	"	"	"	KAP	"	"	

pH in Soil by 9045D

pH	7.63		pH Units	1	B111506	JSM	09/15/2021	09/15/2021	
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SAR by 20B Saturated Paste

SAR	0.125		SAR	10	B111711	KAP	09/17/2021	09/17/2021	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.210	0.00500	mmhos/cm	1	B111505	JSM	09/15/2021	09/15/2021	
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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: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 B111429 - EPA 5030 (soil)

Blank (B111429-BLK1)

Prepared: 09/14/2021 Analyzed: 09/14/2021

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
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	"							U
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125	112		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	98.7		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	102		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: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 B111429 - EPA 5030 (soil)

LCS (B111429-BS1)

Prepared: 09/14/2021 Analyzed: 09/14/2021

1,2,4-Trimethylbenzene	0.0543	0.00200	mg/kg	0.0500		109	70-130			
Naphthalene	0.0499	0.0100	"	0.0500		99.8	70-130			
1,3,5-Trimethylbenzene	0.0535	0.00200	"	0.0500		107	70-130			
Benzene	0.0506	0.00200	"	0.0500		101	70-130			
Ethylbenzene	0.0523	0.00200	"	0.0500		105	70-130			
m,p-Xylene	0.110	0.00400	"	0.100		110	70-130			
o-Xylene	0.0538	0.00200	"	0.0500		108	70-130			
Toluene	0.0511	0.00200	"	0.0500		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		112	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.3	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: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 B111429 - EPA 5030 (soil)

Matrix Spike (B111429-MS1)	Source: Y109258-01			Prepared: 09/14/2021 Analyzed: 09/14/2021						
1,2,4-Trimethylbenzene	0.0513	0.00200	mg/kg	0.0500	0.000720	101	70-130			
Naphthalene	0.0476	0.0100	"	0.0500	0.00192	91.4	70-130			
1,3,5-Trimethylbenzene	0.0512	0.00200	"	0.0500	ND	102	70-130			
Benzene	0.0493	0.00200	"	0.0500	ND	98.6	70-130			
Ethylbenzene	0.0497	0.00200	"	0.0500	ND	99.5	70-130			
m,p-Xylene	0.105	0.00400	"	0.100	ND	105	70-130			
o-Xylene	0.0516	0.00200	"	0.0500	ND	103	70-130			
Toluene	0.0496	0.00200	"	0.0500	ND	99.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		112	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.4	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 B111429 - EPA 5030 (soil)

Matrix Spike Dup (B111429-MSD1)	Source: Y109258-01			Prepared: 09/14/2021 Analyzed: 09/14/2021						
1,2,4-Trimethylbenzene	0.0517	0.00200	mg/kg	0.0500	0.000720	102	70-130	0.893	20	
Naphthalene	0.0479	0.0100	"	0.0500	0.00192	92.0	70-130	0.628	20	
1,3,5-Trimethylbenzene	0.0514	0.00200	"	0.0500	ND	103	70-130	0.429	20	
Benzene	0.0484	0.00200	"	0.0500	ND	96.9	70-130	1.80	20	
Ethylbenzene	0.0504	0.00200	"	0.0500	ND	101	70-130	1.40	20	
m,p-Xylene	0.105	0.00400	"	0.100	ND	105	70-130	0.0569	20	
o-Xylene	0.0519	0.00200	"	0.0500	ND	104	70-130	0.618	20	
Toluene	0.0481	0.00200	"	0.0500	ND	96.1	70-130	3.11	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		115	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 B111430 - EPA 3550B										
Blank (B111430-BLK1)										
					Prepared: 09/14/2021 Analyzed: 09/14/2021					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	24		"	25.0		98.0	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 B111430 - EPA 3550B

LCS (B111430-BS1)

Prepared: 09/14/2021 Analyzed: 09/14/2021

Diesel (C10-C28)	769	50.0	mg/kg	1000		76.9	70-130			
Residual Range Organics (C28-C40)	807	200	"	1000		80.7	70-130			
Surrogate: o-Terphenyl	41		"	50.0		81.1	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 B111430 - EPA 3550B

Matrix Spike (B111430-MS1)	Source: Y109258-01			Prepared: 09/14/2021 Analyzed: 09/14/2021						
Diesel (C10-C28)	877	50.0	mg/kg	1000	ND	87.7	70-130			
Residual Range Organics (C28-C40)	933	200	"	1000	ND	93.3	70-130			
Surrogate: o-Terphenyl	48		"	50.0		96.7	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 B111430 - EPA 3550B

Matrix Spike Dup (B111430-MSD1)	Source: Y109258-01			Prepared: 09/14/2021 Analyzed: 09/14/2021						
Diesel (C10-C28)	1180	50.0	mg/kg	1000	ND	118	70-130	29.4	35	
Residual Range Organics (C28-C40)	1290	200	"	1000	ND	129	70-130	31.8	35	
Surrogate: o-Terphenyl	64		"	50.0		128	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 B111505 - NO PREP

Blank (B111505-BLK1)

Prepared: 09/15/2021 Analyzed: 09/15/2021

Specific Conductance (EC) 0.00300 0.00500 mmhos/cm

Duplicate (B111505-DUP1)

Source: Y109237-01

Prepared: 09/15/2021 Analyzed: 09/15/2021

Specific Conductance (EC) 4.02 0.00500 mmhos/cm 3.29 19.9 25

Batch B111506 - NO PREP

Duplicate (B111506-DUP1)

Source: Y109237-01

Prepared: 09/15/2021 Analyzed: 09/15/2021

pH 7.76 pH Units 7.80 0.514 25

Batch B111603 - NO PREP

Duplicate (B111603-DUP1)

Source: Y109262-01

Prepared: 09/16/2021 Analyzed: 09/16/2021

pH 7.83 pH Units 7.92 1.14 25

Batch B111606 - NO PREP

Blank (B111606-BLK1)

Prepared: 09/16/2021 Analyzed: 09/16/2021

Specific Conductance (EC) 0.00240 0.00500 mmhos/cm

Duplicate (B111606-DUP1)

Source: Y109262-01

Prepared: 09/16/2021 Analyzed: 09/16/2021

Specific Conductance (EC) 0.761 0.00500 mmhos/cm 0.708 7.16 25

Origins Laboratory, Inc.



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Tasman Geosciences
6855 West 119th Avenue
Broomfield CO 80020

Mike Jahn
Project Number: 90428052
Project: KMG - Bryant 9&34-30A O SA Facility

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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.

September 21, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Bryant 9&34-30A O SA
Facility**

Project Number - 90428052

Attached are your analytical results for KMG - Bryant 9&34-30A O SA Facility received by Origins Laboratory, Inc. September 15, 2021. This project is associated with Origins project number Y109288-01.

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: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST-B11@3"	Y109288-01	Soil	September 15, 2021 11:45	09/15/2021 15:52
AST-BG01@3"	Y109288-02	Soil	September 15, 2021 11:47	09/15/2021 15:52
AST-BG02@3"	Y109288-03	Soil	September 15, 2021 11:45	09/15/2021 15:52
AST-BG03@3"	Y109288-04	Soil	September 15, 2021 11:51	09/15/2021 15:52
AST-BG04@3"	Y109288-05	Soil	September 15, 2021 11:53	09/15/2021 15:52

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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

Sample Receipt Checklist

Origins Work Order: 4109288 Client: Tasman
 Client Project ID: Bryant 9+34

Checklist Completed by: JG Shipped Via: HD
 Date/time completed: 9/15/21 (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: 115.7 °C / _____ °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 (> 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"/>	

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 9/15/21

Origins Laboratory, Inc.

Jen Pellegrini

Jen Pellegrini, Project Manager

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: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-B11@3"

9/15/2021 11:45:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y109288-01 (Soil)

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.00067	0.00067	mg/Kg	1	L574523	09/17/2021	09/17/2021	
2-Methylnaphthalene	ND	0.00067	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.00067	0.00067	"	"	"	"	"	
Anthracene	ND	0.00067	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.00067	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.00067	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.00067	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.00067	0.00067	"	"	"	"	"	
Chrysene	ND	0.00067	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.00067	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.00067	0.00067	"	"	"	"	"	
Fluorene	ND	0.00067	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.00067	0.00067	"	"	"	"	"	
Naphthalene	ND	0.00067	0.00067	"	"	"	"	"	
Pyrene	ND	0.00067	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	79.6 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	77.8 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	72.6 %		29-110			"	"	"	

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-B11@3"

9/15/2021 11:45:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y109288-01 (Soil)

Total Metals by 6020B

Arsenic	1.21	0.25	0.25	mg/Kg	5	L574455	09/16/2021	09/17/2021	
Barium	36.4	0.25	0.25	"	"	"	"	"	
Cadmium	0.0417	0.25	0.25	"	"	"	"	"	
Copper	10.1	0.25	0.25	"	"	"	"	"	
Lead	4.72	0.25	0.25	"	"	"	"	"	
Nickel	6.03	0.25	0.25	"	"	"	"	"	
Selenium	0.22	0.25	0.25	"	"	"	"	"	
Silver	0.0283	0.25	0.25	"	"	"	"	"	
Zinc	23	2.5	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.51	0.51	mg/Kg	1	L574532	09/15/2021	09/17/2021	
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-BG01@3"

9/15/2021 11:47:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y109288-02 (Soil)

Total Metals by 6020B

Arsenic	1.46	0.25	0.25	mg/Kg	5	L574455	09/16/2021	09/17/2021	
Barium	47.3	0.25	0.25	"	"	"	"	"	
Cadmium	0.0457	0.25	0.25	"	"	"	"	"	
Copper	6.11	0.25	0.25	"	"	"	"	"	
Lead	4.52	0.25	0.25	"	"	"	"	"	
Nickel	5.92	0.25	0.25	"	"	"	"	"	
Selenium	0.169	0.25	0.25	"	"	"	"	"	
Silver	0.0184	0.25	0.25	"	"	"	"	"	
Zinc	18.7	2.5	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.501	0.501	mg/Kg	1	L574532	09/15/2021	09/17/2021	
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-BG02@3"

9/15/2021 11:49:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y109288-03 (Soil)

Total Metals by 6020B

Arsenic	1.95	0.25	0.25	mg/Kg	5	L574455	09/16/2021	09/17/2021	
Barium	52.7	0.25	0.25	"	"	"	"	"	
Cadmium	0.0789	0.25	0.25	"	"	"	"	"	
Copper	15.5	0.25	0.25	"	"	"	"	"	
Lead	6.11	0.25	0.25	"	"	"	"	"	
Nickel	6.86	0.25	0.25	"	"	"	"	"	
Selenium	0.263	0.25	0.25	"	"	"	"	"	
Silver	0.0219	0.25	0.25	"	"	"	"	"	
Zinc	28.8	2.5	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.5	0.5	mg/Kg	1	L574532	09/15/2021	09/17/2021	
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-BG03@3"

9/15/2021 11:51:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y109288-04 (Soil)

Total Metals by 6020B

Arsenic	4.99	0.25	0.25	mg/Kg	5	L574455	09/16/2021	09/17/2021	
Barium	56	0.25	0.25	"	"	"	"	"	
Cadmium	0.258	0.25	0.25	"	"	"	"	"	
Copper	7.8	0.25	0.25	"	"	"	"	"	
Lead	4.98	0.25	0.25	"	"	"	"	"	
Nickel	8.56	0.25	0.25	"	"	"	"	"	
Selenium	0.347	0.25	0.25	"	"	"	"	"	
Silver	0.0134	0.25	0.25	"	"	"	"	"	
Zinc	23.9	2.5	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.5	0.5	mg/Kg	1	L574532	09/15/2021	09/17/2021	
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-BG04@3"

9/15/2021 11:53:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.
Y109288-05 (Soil)

Total Metals by 6020B

Arsenic	3.45	0.25	0.25	mg/Kg	5	L574455	09/16/2021	09/17/2021	
Barium	25.2	0.25	0.25	"	"	"	"	"	
Cadmium	0.0843	0.25	0.25	"	"	"	"	"	
Copper	4.39	0.25	0.25	"	"	"	"	"	
Lead	4.43	0.25	0.25	"	"	"	"	"	
Nickel	4.74	0.25	0.25	"	"	"	"	"	
Selenium	0.214	0.25	0.25	"	"	"	"	"	
Silver	0.0229	0.25	0.25	"	"	"	"	"	
Zinc	16.8	2.5	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.5	0.5	mg/Kg	1	L574532	09/15/2021	09/17/2021	
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 L574523 - 3550B

MSD (L 87812-MSD-L574523)	Source: 87812			Prepared: 09/17/2021 Analyzed: 09/17/2021						
Pyrene	0.111	0.00059	mg/Kg	0.166	0.00746	62.3	30-130	11.8	30	
Anthracene	0.107	0.00033	"	0.166	87812	64.4	30-130	8.9	30	
Benzo(a)anthracene	0.106	0.00041	"	0.166	0.0032	61.9	30-130	6.3	30	
Benzo(a)pyrene	0.118	0.00014	"	0.166	0.00421	68.5	30-130	9.6	30	
Benzo(b)fluoranthene	0.118	0.00021	"	0.166	0.00834	66	30-130	5.7	30	
Chrysene	0.108	0.00027	"	0.166	0.00522	61.9	30-130	10.5	30	
2-Methylnaphthalene	0.112	0.00039	"	0.166	87812	67.4	30-130	15.6	30	
Naphthalene	0.0859	0.000467	"	0.166	87812	51.7	30-130	6.6	30	
Indeno(1,2,3-cd)pyrene	0.06	0.00029	"	0.166	0.00468	33.3	30-130	75	30	
Fluorene	0.0836	0.00029	"	0.166	87812	50.3	30-130	26.3	30	
Fluoranthene	0.112	0.00039	"	0.166	0.00933	61.8	30-130	10.9	30	
Dibenz(a,h)anthracene	0.0594	0.00036	"	0.166	0.000622	35.7	30-130	73.8	30	
Benzo(k)fluoranthene	0.0999	0.00013	"	0.166	0.00255	58.6	30-130	2.3	30	
1-Methylnaphthalene	0.114	0.00033	"	0.166	87812	68.6	30-130	15	30	
Acenaphthene	0.0953	0.0003	"	0.166	87812	57.4	30-130	6.7	30	
Surrogate: 4-Terphenyl-d14	107		"	0.332	303	107	33-122			
Surrogate: 2-Fluorobiphenyl	97.5		"	0.332	237	97.5	33-115			
Surrogate: Nitrobenzene-d5	76.8		"	0.332	249	76.8	29-110			

MS (L 87812-MS-L574523)	Source: 87812			Prepared: 09/17/2021 Analyzed: 09/17/2021						
Benzo(k)fluoranthene	0.0976	0.00013	mg/Kg	0.163	0.00255	58.3	30-130			
Fluoranthene	0.125	0.00039	"	0.163	0.00933	70.9	30-130			
Fluorene	0.109	0.00029	"	0.163	87812	66.8	30-130			
Indeno(1,2,3-cd)pyrene	0.132	0.00029	"	0.163	0.00468	78.1	30-130			
Naphthalene	0.0918	0.000467	"	0.163	87812	56.3	30-130			
Pyrene	0.125	0.00059	"	0.163	0.00746	72.1	30-130			
Dibenz(a,h)anthracene	0.129	0.00036	"	0.163	0.000622	79.1	30-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 L574523 - 3550B

MS (L 87812-MS-L574523)	Source: 87812			Prepared: 09/17/2021 Analyzed: 09/17/2021						
1-Methylnaphthalene	0.098	0.00033	mg/Kg	0.163	87812	60.1	30-130			
2-Methylnaphthalene	0.0957	0.00039	"	0.163	87812	58.7	30-130			
Benzo(b)fluoranthene	0.125	0.00021	"	0.163	0.00834	71.5	30-130			
Benzo(a)pyrene	0.13	0.00014	"	0.163	0.00421	77.1	30-130			
Benzo(a)anthracene	0.113	0.00041	"	0.163	0.0032	67.3	30-130			
Anthracene	0.117	0.00033	"	0.163	87812	71.7	30-130			
Acenaphthene	0.102	0.0003	"	0.163	87812	62.5	30-130			
Chrysene	0.12	0.00027	"	0.163	0.00522	70.4	30-130			
Surrogate: Nitrobenzene-d5	76.7		"	0.327	249	76.7	29-110			
Surrogate: 4-Terphenyl-d14	100		"	0.327	303	100	33-122			
Surrogate: 2-Fluorobiphenyl	76.7		"	0.327	237	76.7	33-115			

LCS (LCS-L574523)	Prepared: 09/17/2021 Analyzed: 09/17/2021									
Acenaphthene	0.111	0.0003	mg/Kg	0.167		66.4	30-130			
Anthracene	0.12	0.00033	"	0.167		71.8	30-130			
1-Methylnaphthalene	0.108	0.00033	"	0.167		64.6	30-130			
2-Methylnaphthalene	0.105	0.00039	"	0.167		62.8	30-130			
Naphthalene	0.105	0.000467	"	0.167		62.8	30-130			
Indeno(1,2,3-cd)pyrene	0.122	0.00029	"	0.167		73	30-130			
Fluorene	0.117	0.00029	"	0.167		70	30-130			
Fluoranthene	0.119	0.00039	"	0.167		71.2	30-130			
Chrysene	0.118	0.00027	"	0.167		70.6	30-130			
Benzo(k)fluoranthene	0.107	0.00013	"	0.167		64	30-130			
Benzo(b)fluoranthene	0.118	0.00021	"	0.167		70.6	30-130			
Benzo(a)pyrene	0.131	0.00014	"	0.167		78.4	30-130			
Benzo(a)anthracene	0.112	0.00041	"	0.167		67	30-130			
Dibenz(a,h)anthracene	0.122	0.00036	"	0.167		73	30-130			

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 L574523 - 3550B

LCS (LCS-L574523)

Prepared: 09/17/2021 Analyzed: 09/17/2021

Pyrene	0.119	0.00059	mg/Kg	0.167		71.2	30-130			
Surrogate: 2-Fluorobiphenyl	87		"	0.333		87	33-115			
Surrogate: 4-Terphenyl-d14	103		"	0.333		103	33-122			
Surrogate: Nitrobenzene-d5	85.5		"	0.333		85.5	29-110			

LRB (LRB-L574523)

Prepared: 09/17/2021 Analyzed: 09/17/2021

Benzo(k)fluoranthene	ND	0.00067	mg/Kg				-			
Chrysene	ND	0.00067	"				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Fluoranthene	ND	0.00067	"				-			
Fluorene	ND	0.00067	"				-			
Naphthalene	ND	0.00067	"				-			
Anthracene	ND	0.00067	"				-			
Indeno(1,2,3-cd)pyrene	0.000343	0.00067	"				-			J
Benzo(a)anthracene	ND	0.00067	"				-			
1-Methylnaphthalene	ND	0.00067	"				-			
Pyrene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Benzo(a)pyrene	0.000223	0.00067	"				-			J
Surrogate: Nitrobenzene-d5	85.2		"	0.333		85.2	29-110			
Surrogate: 2-Fluorobiphenyl	79.2		"	0.333		79.2	33-115			
Surrogate: 4-Terphenyl-d14	95.1		"	0.333		95.1	33-122			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 L574455 - 3050B

MSD (L 88280-MSD-L574455)		Source: 88280			Prepared: 09/16/2021 Analyzed: 09/17/2021					
Cadmium	0.646	0.0259	mg/Kg	0.486	0.162	133	75-125	11.1	80	*
Barium	107	0.042	"	4.86	107	0	75-125	11.4	80	*
Copper	12.2	0.0806	"	2.43	9.94	93	75-125	5	80	
Lead	11.5	0.031	"	2.43	9.85	68	75-125	3.4	80	*
Nickel	14.5	0.0633	"	2.43	12.4	86	75-125	4.9	80	
Selenium	3.72	0.103	"	4.86	0.308	70	75-125	7.5	80	*
Silver	0.521	0.0067	"	0.486	0.0544	107	75-125	10.9	80	
Zinc	71.2	0.534	"	24.3	47.1	99	75-125	2.7	80	
Arsenic	4.51	0.0855	"	2.43	3.25	52	75-125	11.4	80	*

MS (L 88280-MS-L574455)		Source: 88280			Prepared: 09/16/2021 Analyzed: 09/17/2021					
Zinc	69.3	0.534	mg/Kg	23.8	47.1	93	75-125			
Arsenic	5.06	0.0855	"	2.38	3.25	76	75-125			
Barium	95.4	0.042	"	4.75	107	NR	75-125			*
Cadmium	0.578	0.0259	"	0.475	0.162	122	75-125			
Copper	11.6	0.0806	"	2.38	9.94	70	75-125			*
Lead	11.9	0.031	"	2.38	9.85	86	75-125			
Nickel	13.8	0.0633	"	2.38	12.4	59	75-125			*
Selenium	3.45	0.103	"	4.75	0.308	66	75-125			*
Silver	0.467	0.0067	"	0.475	0.0544	98	75-125			

LCS (LCS-L574455)		Prepared: 09/16/2021 Analyzed: 09/17/2021								
Lead	2.36	0.031	mg/Kg	2.5		94	80-120			
Zinc	22.8	0.534	"	25		91	80-120			
Silver	0.47	0.0067	"	0.5		94	80-120			
Nickel	2.22	0.0633	"	2.5		89	80-120			
Copper	2.3	0.0806	"	2.5		92	80-120			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 L574455 - 3050B

LCS (LCS-L574455)

Prepared: 09/16/2021 Analyzed: 09/17/2021

Barium	4.77	0.042	mg/Kg	5		95	80-120			
Arsenic	2.5	0.0855	"	2.5		100	80-120			
Cadmium	0.465	0.0259	"	0.5		93	80-120			
Selenium	4.81	0.103	"	5		96	80-120			

LRB (LRB-L574455)

Prepared: 09/16/2021 Analyzed: 09/17/2021

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	ND	0.25	"				-			
Cadmium	ND	0.25	"				-			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 L574532 -										
DUP (L 88199-DUP)		Source: Y109288-01			Prepared: Analyzed: 09/17/2021					
Chromium, Hexavalent	ND	0.244	mg/Kg		88199		-	0	20	
MS (L 88199-MS)		Source: Y109288-01			Prepared: Analyzed: 09/17/2021					
Chromium, Hexavalent	6.18	0.252	mg/Kg	8.3	88199	74	75-125			*
LCS (LCS)		Prepared: Analyzed: 09/17/2021								
Chromium, Hexavalent	6.75	0.244	mg/Kg	8		84	75-125			
LRB (LRB)		Prepared: Analyzed: 09/17/2021								
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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: 90428052
Project: KMG - Bryant 9&34-30A O SA Facility

Notes and Definitions

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.



Jen Pellegrini, Project Manager

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.

October 06, 2021

Tasman Geosciences

Mike Jahn

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Bryant 9&34-30A O SA
Facility**

Project Number - 90428052

Attached are your analytical results for KMG - Bryant 9&34-30A O SA Facility received by Origins Laboratory, Inc. October 05, 2021. This project is associated with Origins project number Y110095-01.

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: 90428052
Project: KMG - Bryant 9&34-30A O SA Facility

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST-N01@3'	Y110095-01	Soil	October 5, 2021 15:50	10/05/2021 17:30
AST-S01@3'	Y110095-02	Soil	October 5, 2021 15:52	10/05/2021 17:30
AST-E01@3'	Y110095-03	Soil	October 5, 2021 15:54	10/05/2021 17:30
AST-W01@3'	Y110095-04	Soil	October 5, 2021 15:56	10/05/2021 17:30

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

Origins Laboratory

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

Origins Work Order: 7110095

Client: Tasman

Client Project ID: Bryant

Checklist Completed by: JM

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

Date/time completed: 10/5/21

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 5.4 °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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+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) [Signature] Date/Time Reviewed 10/5/21

Origins Laboratory, Inc.

Jordan A. Merrill

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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-N01@3'
10/5/2021 3:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y110095-01 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B1J0513	KDK	10/05/2021	10/05/2021	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: *o*-Terphenyl 74.3 % 50-150 " " "

GRO/TVPH by EPA 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B1J0514	KDK	10/05/2021	10/06/2021	U
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Surrogate: 1,2-Dichloroethane-d4 93.2 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "
 Surrogate: Toluene-d8 94.9 % 70-130 " " "
 Surrogate: Fluorobenzene 0.100 % 50-200 " " "
 Surrogate: Chlorobenzene-d5 0.100 % 50-200 " " "
 Surrogate: 1,4-Dichlorobenzene-d4 0.100 % 50-200 " " "

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-S01@3'
10/5/2021 3:52:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y110095-02 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B1J0513	KDK	10/05/2021	10/05/2021	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: *o*-Terphenyl 75.8 % 50-150 " " "

GRO/TVPH by EPA 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B1J0514	KDK	10/05/2021	10/06/2021	U
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Surrogate: 1,2-Dichloroethane-d4 93.3 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

Surrogate: Toluene-d8 94.6 % 70-130 " " "

Surrogate: Fluorobenzene 0.100 % 50-200 " " "

Surrogate: Chlorobenzene-d5 0.100 % 50-200 " " "

Surrogate: 1,4-Dichlorobenzene-d4 0.100 % 50-200 " " "

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-E01@3'
10/5/2021 3:54:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y110095-03 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B1J0513	KDK	10/05/2021	10/05/2021	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: *o*-Terphenyl 77.2 % 50-150 " " "

GRO/TVPH by EPA 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B1J0514	KDK	10/05/2021	10/06/2021	U
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Surrogate: 1,2-Dichloroethane-d4 93.3 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 104 % 70-130 " " "
 Surrogate: Toluene-d8 95.3 % 70-130 " " "
 Surrogate: Fluorobenzene 0.100 % 50-200 " " "
 Surrogate: Chlorobenzene-d5 0.100 % 50-200 " " "
 Surrogate: 1,4-Dichlorobenzene-d4 0.100 % 50-200 " " "

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

AST-W01@3'
10/5/2021 3:56:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y110095-04 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B1J0513	KDK	10/05/2021	10/05/2021	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: *o*-Terphenyl 72.7 % 50-150 " " "

GRO/TVPH by EPA 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B1J0514	KDK	10/05/2021	10/06/2021	U
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Surrogate: 1,2-Dichloroethane-d4 94.4 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

Surrogate: Toluene-d8 94.8 % 70-130 " " "

Surrogate: Fluorobenzene 0.100 % 50-200 " " "

Surrogate: Chlorobenzene-d5 0.100 % 50-200 " " "

Surrogate: 1,4-Dichlorobenzene-d4 0.100 % 50-200 " " "

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 B1J0513 - EPA 3550B										
Blank (B1J0513-BLK1)										
					Prepared: 10/05/2021 Analyzed: 10/05/2021					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	15		"	25.0		61.0	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 B1J0513 - EPA 3550B

LCS (B1J0513-BS1)

Prepared: 10/05/2021 Analyzed: 10/05/2021

Diesel (C10-C28)	705	50.0	mg/kg	1000		70.5	70-130			
Residual Range Organics (C28-C40)	839	200	"	1000		83.9	70-130			
Surrogate: o-Terphenyl	36		"	50.0		72.7	50-150			

Origins Laboratory, Inc.



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 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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 B1J0513 - EPA 3550B

Matrix Spike (B1J0513-MS1)	Source: Y110077-01			Prepared: 10/05/2021 Analyzed: 10/05/2021						
Diesel (C10-C28)	663	50.0	mg/kg	1000	ND	66.3	70-130			QM-07
Residual Range Organics (C28-C40)	775	200	"	1000	ND	77.5	70-130			
Surrogate: o-Terphenyl	35		"	50.0		69.6	50-150			

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 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
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Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B1J0513 - EPA 3550B

Matrix Spike Dup (B1J0513-MSD1)	Source: Y110077-01			Prepared: 10/05/2021 Analyzed: 10/05/2021						
Diesel (C10-C28)	713	50.0	mg/kg	1000	ND	71.3	70-130	7.38	35	
Residual Range Organics (C28-C40)	870	200	"	1000	ND	87.0	70-130	11.5	35	
Surrogate: o-Terphenyl	38		"	50.0		76.7	50-150			

Origins Laboratory, Inc.



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 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

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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Volatile Organic Compounds by EPA Method 8260B - 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 B1J0514 - EPA 5030 (soil)

Blank (B1J0514-BLK1)

Prepared: 10/05/2021 Analyzed: 10/06/2021

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.7	70-130			
Surrogate: Fluorobenzene	62		ug/kg	62500		0.100	50-200			
Surrogate: Chlorobenzene-d5	62		"	62500		0.100	50-200			
Surrogate: 1,4-Dichlorobenzene-d4	62		"	62500		0.100	50-200			

LCS (B1J0514-BS1)

Prepared: 10/05/2021 Analyzed: 10/06/2021

Gasoline Range Hydrocarbons	ND	0.200	mg/kg				70-130			U
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.9	70-130			
Surrogate: Fluorobenzene	62		ug/kg	62500		0.100	50-200			
Surrogate: Chlorobenzene-d5	62		"	62500		0.100	50-200			
Surrogate: 1,4-Dichlorobenzene-d4	62		"	62500		0.100	50-200			

Matrix Spike (B1J0514-MS1)

Source: Y110024-01

Prepared: 10/05/2021 Analyzed: 10/06/2021

Surrogate: 1,2-Dichloroethane-d4	0.13		mg/kg	0.125		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.1	70-130			
Surrogate: Fluorobenzene	62		ug/kg	62500		0.100	50-200			

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 West 119th Avenue
 Broomfield CO 80020

Mike Jahn
 Project Number: 90428052
 Project: KMG - Bryant 9&34-30A O SA Facility

Volatile Organic Compounds by EPA Method 8260B - 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 B1J0514 - EPA 5030 (soil)

Matrix Spike (B1J0514-MS1)

Source: Y110024-01

Prepared: 10/05/2021 Analyzed: 10/06/2021

Surrogate: Chlorobenzene-d5	62		ug/kg	62500		0.100	50-200			
Surrogate: 1,4-Dichlorobenzene-d4	62		"	62500		0.100	50-200			

Matrix Spike Dup (B1J0514-MSD1)

Source: Y110024-01

Prepared: 10/05/2021 Analyzed: 10/06/2021

Surrogate: 1,2-Dichloroethane-d4	0.13		mg/kg	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.9	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.6	70-130			
Surrogate: Fluorobenzene	62		ug/kg	62500		0.100	50-200			
Surrogate: Chlorobenzene-d5	62		"	62500		0.100	50-200			
Surrogate: 1,4-Dichlorobenzene-d4	62		"	62500		0.100	50-200			

Origins Laboratory, Inc.



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Tasman Geosciences
6855 West 119th Avenue
Broomfield CO 80020

Mike Jahn
Project Number: 90428052
Project: KMG - Bryant 9&34-30A O SA Facility

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.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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