

Tetra Tech Inc.

January 10, 2025

Mark Reisig

1560 Broadway, Suite 1400

Denver

CO

80202

**Project Name - KMG - Bryant 16-30 WH/FL &
Bryant 36-30 WH**

Project Number - 31072

Attached are your analytical results for KMG - Bryant 16-30 WH/FL & Bryant 36-30 WH received by Origins Laboratory December 17, 2024. This project is associated with Origins project number E4L0620-01.

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

303.433.1322

projectmanager@originslab.com



Tetra Tech Inc.
1560 Broadway, Suite 1400
Denver CO 80202

Mark Reisig
Project Number: 31072
Project: KMG - Bryant 16-30 WH/FL & Bryant
36-30 WH

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
16-FL-B01RS@4	E4L0620-01	Soil	December 17, 2024 12:10	12/17/2024 18:20
16-FL-B01RS2@4	E4L0620-02	Soil	December 17, 2024 12:10	12/17/2024 18:20
BG01@3.5	E4L0620-03	Soil	December 17, 2024 9:15	12/17/2024 18:20
BG04@3.5	E4L0620-04	Soil	December 17, 2024 11:55	12/17/2024 18:20

Origins Laboratory



Jen Pellegrini, Project Manager

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Mark Reisig
Project Number: 31072
Project: KMG - Bryant 16-30 WH/FL & Bryant
36-30 WH

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

Sample Receipt Checklist

Origins Work Order: EA10520 Client: Tetra Tech
 Client Project ID: Bryant 16-30
 Checklist Completed by: US / KK Shipped Via: _____
 Date/time completed: 12/17/24 (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 / 6 °C _____ °C _____ °C (Describe) _____ °C
 Thermometer ID: 1007

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	/			SD
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		/		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	/			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	/			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	/			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			/	
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)			/	
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) [Signature]

Date/Time Reviewed 12/17/24

Origins Laboratory

[Signature]

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Mark Reisig
Project Number: 31072
Project: KMG - Bryant 16-30 WH/FL & Bryant
36-30 WH

16-FL-B01RS@4

12/17/2024 12:10:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0620-01 (Soil)

Table 915 metals by EPA 6020B

Barium	126		9.63	mg/kg	10	B4L1761	12/17/2024	12/18/2024	
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Origins Laboratory

Jen Pellegrini, Project Manager

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Mark Reisig
Project Number: 31072
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36-30 WH

16-FL-B01RS2@4


12/17/2024 12:10:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0620-02 (Soil)

Table 915 metals by EPA 6020B

Barium	132	9.02	mg/kg	10	B5A0615	01/06/2025	01/07/2025
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Origins Laboratory

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Mark Reisig
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36-30 WH


BG01@3.5

12/17/2024 9:15:00AM

**Origins Laboratory
E4L0620-03 (Soil)**

Table 915 metals by EPA 6020B

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Barium	117		9.34	mg/kg	10	B4L1761	12/17/2024	12/18/2024	

Origins Laboratory

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BG04@3.5

12/17/2024 11:55:00AM

Origins Laboratory
E4L0620-04 (Soil)

Table 915 metals by EPA 6020B

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Barium	17.5		9.24	mg/kg	10	B4L1761	12/17/2024	12/18/2024	

Origins Laboratory

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Mark Reisig
Project Number: 31072
Project: KMG - Bryant 16-30 WH/FL & Bryant 36-30 WH

Metals by EPA 6000/7000 Series Methods - Quality Control Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4L1761 - EPA 3050B

Prepared: 12/17/2024 Analyzed: 12/18/2024

Blank (B4L1761-BLK1)

Arsenic	ND	0.290	mg/kg							U
Barium	ND	10.0	"							U
Cadmium	ND	0.100	"							U
Copper	ND	10.0	"							U
Lead	ND	1.00	"							U
Nickel	ND	1.00	"							U
Selenium	ND	0.260	"							U
Silver	ND	0.100	"							U
Zinc	ND	37.0	"							U

LCS (B4L1761-BS1)

Prepared: 12/17/2024 Analyzed: 12/18/2024

Arsenic	5.00	0.290	mg/kg	5.00		99.9	80-120			
Barium	516	10.0	"	500		103	80-120			
Cadmium	5.47	0.100	"	5.00		109	80-120			
Copper	56.5	10.0	"	50.0		113	80-120			
Lead	5.19	1.00	"	5.00		104	80-120			
Nickel	5.39	1.00	"	5.00		108	80-120			
Selenium	5.46	0.260	"	5.00		109	80-120			
Silver	5.82	0.100	"	5.00		116	80-120			
Zinc	49.8	37.0	"	50.0		99.5	80-120			

Matrix Spike (B4L1761-MS1)

Source: E4L0622-01

Prepared: 12/17/2024 Analyzed: 12/18/2024

Arsenic	7.51	0.271	mg/kg	4.67	1.87	121	75-125			
Barium	575	9.34	"	467	25.2	118	75-125			
Cadmium	4.92	0.0934	"	4.67	0.0951	103	75-125			
Copper	59.5	9.34	"	46.7	1.67	124	75-125			
Lead	11.4	0.934	"	4.67	1.96	203	75-125			QM-07

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Metals by EPA 6000/7000 Series Methods - Quality Control Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4L1761 - EPA 3050B

Matrix Spike (B4L1761-MS1)

Source: E4L0622-01

Prepared: 12/17/2024 Analyzed: 12/18/2024

Nickel	14.5	0.934	mg/kg	4.67	1.12	287	75-125			QM-07
Selenium	4.93	0.243	"	4.67	0.0825	104	75-125			
Silver	5.12	0.0934	"	4.67	0.0592	109	75-125			
Zinc	78.6	34.5	"	46.7	13.0	141	75-125			QM-07

Matrix Spike Dup (B4L1761-MSD1)

Source: E4L0622-01

Prepared: 12/17/2024 Analyzed: 12/18/2024

Arsenic	8.31	0.272	mg/kg	4.69	1.87	137	75-125	10.1	20	QM-07
Barium	558	9.37	"	469	25.2	114	75-125	3.03	20	
Cadmium	4.84	0.0937	"	4.69	0.0951	101	75-125	1.49	20	
Copper	59.9	9.37	"	46.9	1.67	124	75-125	0.713	20	
Lead	11.5	0.937	"	4.69	1.96	204	75-125	0.863	20	QM-07
Nickel	12.6	0.937	"	4.69	1.12	245	75-125	14.2	20	QM-07
Selenium	5.08	0.244	"	4.69	0.0825	107	75-125	2.97	20	
Silver	5.15	0.0937	"	4.69	0.0592	109	75-125	0.411	20	
Zinc	75.4	34.7	"	46.9	13.0	133	75-125	4.18	20	QM-07

Batch B5A0615 - EPA 3050B

Blank (B5A0615-BLK1)

Prepared: 01/06/2025 Analyzed: 01/07/2025

Arsenic	ND	0.290	mg/kg							U
Barium	ND	10.0	"							U
Cadmium	ND	0.100	"							U
Copper	ND	10.0	"							U
Lead	ND	1.00	"							U
Nickel	ND	1.00	"							U
Selenium	ND	0.260	"							U
Silver	ND	0.100	"							U

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Metals by EPA 6000/7000 Series Methods - Quality Control Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5A0615 - EPA 3050B

Blank (B5A0615-BLK1)

Prepared: 01/06/2025 Analyzed: 01/07/2025

Zinc	ND	37.0	mg/kg							U
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LCS (B5A0615-BS1)

Prepared: 01/06/2025 Analyzed: 01/07/2025

Arsenic	5.05	0.290	mg/kg	5.00		101	80-120			
Barium	544	10.0	"	500		109	80-120			
Cadmium	5.40	0.100	"	5.00		108	80-120			
Copper	52.9	10.0	"	50.0		106	80-120			
Lead	5.33	1.00	"	5.00		107	80-120			
Nickel	5.24	1.00	"	5.00		105	80-120			
Selenium	5.50	0.260	"	5.00		110	80-120			
Silver	5.24	0.100	"	5.00		105	80-120			
Zinc	49.9	37.0	"	50.0		99.7	80-120			

Matrix Spike (B5A0615-MS1)

Source: E5A0056-01

Prepared: 01/06/2025 Analyzed: 01/07/2025

Arsenic	6.59	0.284	mg/kg	4.89	1.15	111	75-125			
Barium	632	9.78	"	489	46.7	120	75-125			
Cadmium	5.30	0.0978	"	4.89	0.0359	108	75-125			
Copper	61.5	9.78	"	48.9	3.12	119	75-125			
Lead	8.90	0.978	"	4.89	3.09	119	75-125			
Nickel	9.11	0.978	"	4.89	3.43	116	75-125			
Selenium	5.66	0.254	"	4.89	ND	116	75-125			
Silver	5.12	0.0978	"	4.89	ND	105	75-125			
Zinc	67.5	36.2	"	48.9	14.1	109	75-125			

Matrix Spike Dup (B5A0615-MSD1)

Source: E5A0056-01

Prepared: 01/06/2025 Analyzed: 01/07/2025

Arsenic	5.90	0.259	mg/kg	4.46	1.15	106	75-125	11.1	20	
Barium	505	8.93	"	446	46.7	103	75-125	22.4	20	QR-02

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36-30 WH

Metals by EPA 6000/7000 Series Methods - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5A0615 - EPA 3050B

Matrix Spike Dup (B5A0615-MSD1)

Source: E5A0056-01

Prepared: 01/06/2025 Analyzed: 01/07/2025

Cadmium	4.56	0.0893	mg/kg	4.46	0.0359	101	75-125	15.1	20	
Copper	53.3	8.93	"	44.6	3.12	112	75-125	14.4	20	
Lead	7.49	0.893	"	4.46	3.09	98.7	75-125	17.2	20	
Nickel	7.80	0.893	"	4.46	3.43	97.9	75-125	15.4	20	
Selenium	4.82	0.232	"	4.46	0.0389	107	75-125	16.1	20	
Silver	4.55	0.0893	"	4.46	ND	102	75-125	11.6	20	
Zinc	60.1	33.0	"	44.6	14.1	103	75-125	11.6	20	

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36-30 WH

Notes and Definitions

- U Sample is Non-Detect.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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 on a wet weight basis.

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