

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 08, 2025

Will Blust

Quandary Consultants

4480 Garfield St

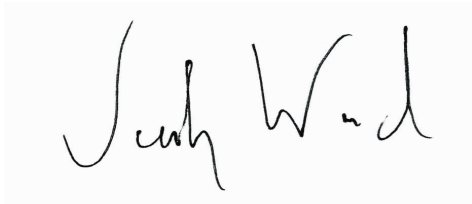
Denver, CO 80237

RE: Bison IV - Fabrizio 33-14

Work Order #2512010

Enclosed are the results of analyses for samples received by Summit Scientific on 12/04/25 16:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial 'J' and 'W'.

Jacob Wood For Gavin Stonehouse  
Lab Manager



Quandary Consultants  
4480 Garfield St  
Denver CO, 80237

Project: Bison IV - Fabrizius 33-14

Project Number: [none]  
Project Manager: Will Blust

**Reported:**  
12/08/25 06:47

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB01@6'	2512010-01	Soil	12/04/25 13:00	12/04/25 16:40

Summit Scientific

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# SUMMIT SCIENTIFIC

4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310

Lab ID	Page 1 of 1
2512010	

Client: <u>Quandaf consultants</u>		Project Manager: <u>Will Blust</u>		Company: <u>Quandaf Consultants</u>	
Address: <u>4480 Garfield St</u>		E-Mail: <u>Samples@quandafconsultants.com</u>		Project Name/Location: <u>Fabricius 33-14</u>	
City/State/Zip: <u>Denver, CO, 80216</u>		Project Name: <u>Bison IV</u>		AFE#:	
Phone: <u>303-227-7308</u>		Project Number: <u>Fabricius 33-14</u>		PO/Billing Codes:	
Sampler Name: <u>AC</u>				Contact:	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions			
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other									
1	SBO1@6'	12/4/25	13:00	3						X			X	Table 915 full							
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <u>Andrew Christensen</u>	Date/Time: <u>12/4/25 16:40</u>	Received by: <u>[Signature]</u>	Date/Time: <u>12/4/25 16:40</u>	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: <u>4.1</u>	Corrected Temperature	IR gun #: <u>2</u>	HNO3 lot #:	Standard	<input checked="" type="checkbox"/> Field Turb.	



### Sample Receipt Checklist

Client: Quandary Consultants Client Project ID: Bison IV-Fabrizius 33-14

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: \_\_\_\_\_

Matrix (Circle all that apply) Air/Soil/Water/Other  Temp (°C) 4.1 Corrected (°C)

Thermometer ID: 2 Bottle ware (Circle all that apply) Glass Jar/VOA/Amber/Poly/Other

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>ON ICE</u>
If custody seals are present, are they intact? <sup>(1)</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD, Total Residual Chlorine(TRC)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If 8260 analyses are requested, were samples collected within 48hrs? If not, is at least one sample jar frozen? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were samples provided in appropriate bottleware?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are any samples/bottles preserved ( <b>excluding cooling</b> )? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Will any samples be performed outside of Summit Scientific? Note analysis in comments column	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Additional Comments (if any):

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.

Josh Sanford  
Custodian Printed Name

12/04/2025 16:40  
Date/Time



Quandary Consultants  
4480 Garfield St  
Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
Project Manager: Will Blust

Reported:  
12/08/25 06:47

**SB01@6'**  
**2512010-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/04/25 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0025	mg/kg dry	1	BIL0068	12/04/25	12/04/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.015	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>0.042</b>	0.0050	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.012</b>	0.0050	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.031</b>	0.0038	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>0.74</b>	0.50	"	"	"	"	"	"	

Date Sampled: **12/04/25 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0511	92.0 %	50-150	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>	0.0560	101 %	50-150	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0548	98.8 %	50-150	"	"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/04/25 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg dry	1	BIL0069	12/04/25	12/04/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/04/25 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<i>Surrogate: o-Terphenyl</i>	32.6	92.3 %	50-140	"	"	"	"	"	

**PAH by EPA Method 8270E SIM**

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Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
Project Manager: Will Blust

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**SB01@6'**  
**2512010-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270E SIM**

Date Sampled: **12/04/25 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Acenaphthene</b>	<b>0.00611</b>	0.00500	mg/kg dry	1	BIL0059	12/05/25	12/05/25	EPA 8270E SIM	
<b>Anthracene</b>	<b>0.00587</b>	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0122</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0100	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.0377</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.0100	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.00969</b>	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.129</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.186</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **12/04/25 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0280	60.3 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0285	61.3 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **12/04/25 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	1.00	mg/L dry	1	BIL0062	12/04/25	12/05/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **12/04/25 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Arsenic</b>	<b>4.63</b>	0.200	mg/kg dry	1	BIL0061	12/04/25	12/05/25	EPA 6020B	

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4480 Garfield St  
Denver CO, 80237

Project: Bison IV - Fabrizius 33-14

Project Number: [none]  
Project Manager: Will Blust

**Reported:**  
12/08/25 06:47

**SB01@6'**  
**2512010-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Barium	248	0.400	mg/kg dry	1	BIL0061	12/04/25	12/05/25	EPA 6020B	
Cadmium	0.408	0.200	"	"	"	"	"	"	"
Copper	35.5	0.400	"	"	"	"	"	"	"
Lead	10.0	0.200	"	"	"	"	"	"	"
Nickel	7.90	0.400	"	"	"	"	"	"	"
Silver	0.0373	0.0200	"	"	"	"	"	"	"
Zinc	33.9	0.400	"	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"	"

**Hexavalent Chromium by HACH M8023**

Date Sampled: 12/04/25 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIL0063	12/04/25	12/05/25	HACH M10218	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: 12/04/25 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	4110	0.500	mg/L dry	10	BIL0065	12/04/25	12/05/25	EPA 6020B	
Magnesium	227	0.500	"	"	"	"	"	"	"
Sodium	204	0.500	"	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: 12/04/25 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.839	0.00100	units	1	BIL0070	12/05/25	12/05/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: 12/04/25 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	71.8		%	1	BIL0064	12/04/25	12/05/25	Calculation	

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 Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
 Project Manager: Will Blust

**Reported:**  
 12/08/25 06:47

**SB01@6'**  
**2512010-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **12/04/25 13:00**

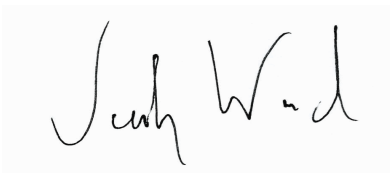
Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	<b>0.356</b>	0.0100	mmhos/cm	1	BIL0067	12/04/25	12/05/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **12/04/25 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>8.24</b>		pH Units	1	BIL0066	12/04/25	12/05/25	EPA 9045D	

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Project Number: [none]  
Project Manager: Will Blust

Reported:  
12/08/25 06:47

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting		Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
		Limit	Units							

**Batch BIL0068 - EPA 5030 Soil MS**

**Blank (BIL0068-BLK1)**

Prepared & Analyzed: 12/04/25

Benzene	ND	0.0025	mg/kg wet							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.015	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0434		"	0.0402		108	50-150			
<i>Surrogate: Toluene-d8</i>	0.0402		"	0.0402		100	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0410		"	0.0402		102	50-150			

**LCS (BIL0068-BS1)**

Prepared & Analyzed: 12/04/25

Benzene	0.0891	0.0025	mg/kg wet	0.0986		90.3	70-130			
Toluene	0.0872	0.0050	"	0.0986		88.5	70-130			
Ethylbenzene	0.0900	0.0050	"	0.0986		91.2	70-130			
m,p-Xylene	0.177	0.010	"	0.197		89.7	70-130			
o-Xylene	0.0886	0.0050	"	0.0986		89.8	70-130			
1,2,4-Trimethylbenzene	0.0913	0.0050	"	0.0986		92.6	70-130			
1,3,5-Trimethylbenzene	0.0918	0.0050	"	0.0986		93.1	70-130			
Naphthalene	0.0869	0.0038	"	0.0986		88.1	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0407		"	0.0394		103	50-150			
<i>Surrogate: Toluene-d8</i>	0.0401		"	0.0394		102	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0401		"	0.0394		102	50-150			

**Matrix Spike (BIL0068-MS1)**

Source: 2512010-01

Prepared & Analyzed: 12/04/25

Benzene	0.121	0.0025	mg/kg dry	0.139	ND	86.8	70-130			
Toluene	0.114	0.0050	"	0.139	ND	82.4	70-130			
Ethylbenzene	0.115	0.0050	"	0.139	ND	82.7	70-130			
m,p-Xylene	0.224	0.010	"	0.278	0.00654	78.5	70-130			
o-Xylene	0.117	0.0050	"	0.139	0.00545	80.3	70-130			
1,2,4-Trimethylbenzene	0.125	0.0050	"	0.139	0.0424	59.4	70-130			QM-05
1,3,5-Trimethylbenzene	0.113	0.0050	"	0.139	0.0115	73.2	70-130			
Naphthalene	0.104	0.0038	"	0.139	0.0307	52.7	70-130			QM-05
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0535		"	0.0555		96.4	50-150			
<i>Surrogate: Toluene-d8</i>	0.0566		"	0.0555		102	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0558		"	0.0555		101	50-150			

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Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
Project Manager: Will Blust

**Reported:**  
12/08/25 06:47

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Notes
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**Batch BIL0068 - EPA 5030 Soil MS**

**Matrix Spike Dup (BIL0068-MSD1)**

Source: 2512010-01

Prepared & Analyzed: 12/04/25

Benzene	0.120	0.0025	mg/kg dry	0.138	ND	87.2	70-130	0.148	30	
Toluene	0.113	0.0050	"	0.138	ND	81.9	70-130	1.25	30	
Ethylbenzene	0.109	0.0050	"	0.138	ND	79.3	70-130	4.89	30	
m,p-Xylene	0.213	0.010	"	0.276	0.00654	74.7	70-130	5.33	30	
o-Xylene	0.113	0.0050	"	0.138	0.00545	78.0	70-130	3.27	30	
1,2,4-Trimethylbenzene	0.136	0.0050	"	0.138	0.0424	67.8	70-130	8.47	30	QM-05
1,3,5-Trimethylbenzene	0.107	0.0050	"	0.138	0.0115	69.4	70-130	5.27	30	QM-05
Naphthalene	0.117	0.0038	"	0.138	0.0307	62.8	70-130	12.1	30	QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0607		"	0.0552		110	50-150			
Surrogate: Toluene-d8	0.0556		"	0.0552		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0548		"	0.0552		99.4	50-150			

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4480 Garfield St  
Denver CO, 80237

Project: Bison IV - Fabrzius 33-14

Project Number: [none]  
Project Manager: Will Blust

**Reported:**  
12/08/25 06:47

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Notes
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**Batch BIL0069 - EPA 3550A**

**Blank (BIL0069-BLK1)**

Prepared & Analyzed: 12/04/25

C10-C28 (DRO)	ND	50	mg/kg wet							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	23.7		"	25.1		94.7	50-140			

**LCS (BIL0069-BS1)**

Prepared & Analyzed: 12/04/25

C10-C28 (DRO)	474	50	mg/kg wet	495		95.8	50-140			
C28-C36 (ORO)	461	50	"	495		93.1	0-200			
Surrogate: <i>o</i> -Terphenyl	25.0		"	24.8		101	50-140			

**Matrix Spike (BIL0069-MS1)**

Source: 2512010-01

Prepared & Analyzed: 12/04/25

C10-C28 (DRO)	672	50	mg/kg dry	710	ND	94.7	50-140			
C28-C36 (ORO)	664	50	"	710	ND	93.6	0-200			
Surrogate: <i>o</i> -Terphenyl	33.4		"	35.5		94.1	50-140			

**Matrix Spike Dup (BIL0069-MSD1)**

Source: 2512010-01

Prepared & Analyzed: 12/04/25

C10-C28 (DRO)	674	50	mg/kg dry	686	ND	98.2	50-140	0.226	20	
C28-C36 (ORO)	663	50	"	686	ND	96.6	0-200	0.177	200	
Surrogate: <i>o</i> -Terphenyl	33.0		"	34.3		96.2	50-140			

Summit Scientific

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Quandary Consultants  
4480 Garfield St  
Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
Project Manager: Will Blust

Reported:  
12/08/25 06:47

**PAH by EPA Method 8270E SIM - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch BIL0059 - EPA 3550A**

**Blank (BIL0059-BLK1)**

Prepared & Analyzed: 12/05/25

Acenaphthene	ND	0.00500	mg/kg wet							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.0100	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.0100	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0269</i>		"	<i>0.0331</i>		<i>81.3</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0267</i>		"	<i>0.0331</i>		<i>80.5</i>	<i>40-140</i>			

**LCS (BIL0059-BS1)**

Prepared & Analyzed: 12/05/25

Acenaphthene	0.0239	0.00500	mg/kg wet	0.0335		71.4	40-140			
Anthracene	0.0248	0.00500	"	0.0335		74.1	40-140			
Benzo (a) anthracene	0.0244	0.00500	"	0.0335		72.7	40-140			
Benzo (a) pyrene	0.0236	0.00500	"	0.0335		70.4	40-140			
Benzo (b) fluoranthene	0.0236	0.00500	"	0.0335		70.3	40-140			
Benzo (k) fluoranthene	0.0230	0.00500	"	0.0335		68.8	40-140			
Chrysene	0.0235	0.00500	"	0.0335		70.2	40-140			
Dibenz (a,h) anthracene	0.0235	0.0100	"	0.0335		70.2	40-140			
Fluoranthene	0.0254	0.00500	"	0.0335		75.7	40-140			
Fluorene	0.0244	0.00500	"	0.0335		72.9	40-140			
Indeno (1,2,3-cd) pyrene	0.0236	0.0100	"	0.0335		70.4	40-140			
Pyrene	0.0254	0.00500	"	0.0335		75.9	40-140			
1-Methylnaphthalene	0.0237	0.00500	"	0.0335		70.8	40-140			
2-Methylnaphthalene	0.0238	0.00500	"	0.0335		71.2	40-140			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0240</i>		"	<i>0.0335</i>		<i>71.7</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0256</i>		"	<i>0.0335</i>		<i>76.5</i>	<i>40-140</i>			

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Quandary Consultants  
4480 Garfield St  
Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
Project Manager: Will Blust

Reported:  
12/08/25 06:47

**PAH by EPA Method 8270E SIM - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Notes
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**Batch BIL0059 - EPA 3550A**

**Matrix Spike (BIL0059-MSI)**

Source: 2512011-01

Prepared & Analyzed: 12/05/25

Acenaphthene	0.0206	0.00500	mg/kg dry	0.0361	ND	57.1	40-140			
Anthracene	0.0215	0.00500	"	0.0361	ND	59.8	40-140			
Benzo (a) anthracene	0.0212	0.00500	"	0.0361	ND	58.9	40-140			
Benzo (a) pyrene	0.0199	0.00500	"	0.0361	ND	55.2	40-140			
Benzo (b) fluoranthene	0.0201	0.00500	"	0.0361	ND	55.8	40-140			
Benzo (k) fluoranthene	0.0197	0.00500	"	0.0361	ND	54.6	40-140			
Chrysene	0.0212	0.00500	"	0.0361	ND	58.9	40-140			
Dibenz (a,h) anthracene	0.0194	0.0100	"	0.0361	ND	53.9	40-140			
Fluoranthene	0.0217	0.00500	"	0.0361	ND	60.3	40-140			
Fluorene	0.0212	0.00500	"	0.0361	ND	58.8	40-140			
Indeno (1,2,3-cd) pyrene	0.0197	0.0100	"	0.0361	ND	54.8	40-140			
Pyrene	0.0219	0.00500	"	0.0361	ND	60.7	40-140			
1-Methylnaphthalene	0.0222	0.00500	"	0.0361	ND	61.6	40-140			
2-Methylnaphthalene	0.0221	0.00500	"	0.0361	ND	61.4	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0204		"	0.0361		56.5	40-140			
Surrogate: Fluoranthene-d10	0.0210		"	0.0361		58.3	40-140			

**Matrix Spike Dup (BIL0059-MSD1)**

Source: 2512011-01

Prepared & Analyzed: 12/05/25

Acenaphthene	0.0213	0.00500	mg/kg dry	0.0362	ND	58.9	40-140	3.45	30	
Anthracene	0.0224	0.00500	"	0.0362	ND	61.7	40-140	3.72	30	
Benzo (a) anthracene	0.0217	0.00500	"	0.0362	ND	59.9	40-140	2.23	30	
Benzo (a) pyrene	0.0202	0.00500	"	0.0362	ND	55.8	40-140	1.46	30	
Benzo (b) fluoranthene	0.0208	0.00500	"	0.0362	ND	57.4	40-140	3.28	30	
Benzo (k) fluoranthene	0.0197	0.00500	"	0.0362	ND	54.3	40-140	0.0363	30	
Chrysene	0.0218	0.00500	"	0.0362	ND	60.2	40-140	2.65	30	
Dibenz (a,h) anthracene	0.0196	0.0100	"	0.0362	ND	54.0	40-140	0.563	30	
Fluoranthene	0.0226	0.00500	"	0.0362	ND	62.5	40-140	4.11	30	
Fluorene	0.0220	0.00500	"	0.0362	ND	60.7	40-140	3.67	30	
Indeno (1,2,3-cd) pyrene	0.0196	0.0100	"	0.0362	ND	54.2	40-140	0.549	30	
Pyrene	0.0226	0.00500	"	0.0362	ND	62.4	40-140	3.38	30	
1-Methylnaphthalene	0.0225	0.00500	"	0.0362	ND	62.2	40-140	1.42	30	
2-Methylnaphthalene	0.0224	0.00500	"	0.0362	ND	61.9	40-140	1.46	30	
Surrogate: 2-Methylnaphthalene-d10	0.0205		"	0.0362		56.6	40-140			
Surrogate: Fluoranthene-d10	0.0219		"	0.0362		60.4	40-140			

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Quandary Consultants  
4480 Garfield St  
Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
Project Manager: Will Blust

**Reported:**  
12/08/25 06:47

**Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control**  
**Summit Scientific**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Notes
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**Batch BIL0062 - EPA 3050B**

<b>Blank (BIL0062-BLK1)</b>		Prepared: 12/04/25 Analyzed: 12/05/25								
Boron	ND	1.00	mg/L wet							
<b>LCS (BIL0062-BS1)</b>		Prepared: 12/04/25 Analyzed: 12/05/25								
Boron	4.91	1.00	mg/L wet	5.02		97.9	80-120			
<b>Duplicate (BIL0062-DUP1)</b>		Source: 2512010-01 Prepared: 12/04/25 Analyzed: 12/05/25								
Boron	0.336	1.00	mg/L dry		0.390			15.1	20	
<b>Matrix Spike (BIL0062-MS1)</b>		Source: 2512010-01 Prepared: 12/04/25 Analyzed: 12/05/25								
Boron	6.62	1.00	mg/L dry	6.94	0.390	89.7	75-125			
<b>Matrix Spike Dup (BIL0062-MSD1)</b>		Source: 2512010-01 Prepared: 12/04/25 Analyzed: 12/05/25								
Boron	6.63	1.00	mg/L dry	6.96	0.390	89.7	75-125	0.289	25	

Summit Scientific

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Quandary Consultants  
4480 Garfield St  
Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
Project Manager: Will Blust

**Reported:**  
12/08/25 06:47

**Total Metals by EPA 6020B - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD	RPD Limit	Notes
		Limit	Units			%REC	Limits			

**Batch BIL0061 - EPA 3050B**

**Blank (BIL0061-BLK1)**

Prepared: 12/04/25 Analyzed: 12/05/25

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

**LCS (BIL0061-BS1)**

Prepared: 12/04/25 Analyzed: 12/05/25

Arsenic	42.6	0.200	mg/kg wet	40.7	105	80-120
Barium	40.3	0.400	"	40.7	99.2	80-120
Cadmium	1.98	0.200	"	2.03	97.4	80-120
Copper	42.8	0.400	"	40.7	105	80-120
Lead	18.7	0.200	"	20.3	91.9	80-120
Nickel	43.2	0.400	"	40.7	106	80-120
Silver	1.99	0.0200	"	2.03	97.7	80-120
Zinc	43.0	0.400	"	40.7	106	80-120
Selenium	4.12	0.260	"	4.07	101	80-120

**Duplicate (BIL0061-DUP1)**

Source: 2512010-01

Prepared: 12/04/25 Analyzed: 12/05/25

Arsenic	4.70	0.200	mg/kg dry	4.63	1.45	20
Barium	251	0.400	"	248	1.26	20
Cadmium	0.426	0.200	"	0.408	4.33	20
Copper	38.0	0.400	"	35.5	6.91	20
Lead	10.2	0.200	"	10.0	1.66	20
Nickel	8.12	0.400	"	7.90	2.80	20
Silver	0.0338	0.0200	"	0.0373	10.0	20
Zinc	35.4	0.400	"	33.9	4.33	20
Selenium	0.195	0.260	"	0.214	9.06	20

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Quandary Consultants  
4480 Garfield St  
Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
Project Manager: Will Blust

**Reported:**  
12/08/25 06:47

**Total Metals by EPA 6020B - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD	Limit	Notes
		Limit	Units		Result	%REC	Limits	RPD			

**Batch BIL0061 - EPA 3050B**

**Matrix Spike (BIL0061-MS1)**

Source: 2512010-01

Prepared: 12/04/25 Analyzed: 12/05/25

Arsenic	57.1	0.200	mg/kg dry	54.9	4.63	95.7	75-125			
Barium	337	0.400	"	54.9	248	162	75-125			QM-05
Cadmium	3.12	0.200	"	2.74	0.408	98.7	75-125			
Copper	92.5	0.400	"	54.9	35.5	104	75-125			
Lead	36.2	0.200	"	27.4	10.0	95.2	75-125			
Nickel	60.8	0.400	"	54.9	7.90	96.4	75-125			
Silver	2.70	0.0200	"	2.74	0.0373	97.0	75-125			
Zinc	88.6	0.400	"	54.9	33.9	99.6	75-125			
Selenium	4.85	0.260	"	5.49	0.214	84.6	75-125			

**Matrix Spike Dup (BIL0061-MSD1)**

Source: 2512010-01

Prepared: 12/04/25 Analyzed: 12/05/25

Arsenic	60.6	0.200	mg/kg dry	55.3	4.63	101	75-125	5.91	25
Barium	308	0.400	"	55.3	248	108	75-125	9.08	25
Cadmium	3.09	0.200	"	2.76	0.408	97.1	75-125	0.753	25
Copper	93.3	0.400	"	55.3	35.5	104	75-125	0.776	25
Lead	37.9	0.200	"	27.6	10.0	101	75-125	4.66	25
Nickel	64.5	0.400	"	55.3	7.90	102	75-125	5.92	25
Silver	2.73	0.0200	"	2.76	0.0373	97.5	75-125	1.22	25
Zinc	90.9	0.400	"	55.3	33.9	103	75-125	2.60	25
Selenium	4.62	0.260	"	5.53	0.214	79.6	75-125	4.99	25

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Quandary Consultants  
4480 Garfield St  
Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
Project Manager: Will Blust

**Reported:**  
12/08/25 06:47

**Hexavalent Chromium by HACH M8023 - Quality Control**  
**Summit Scientific**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Notes
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**Batch BIL0063 - 3060A\_Mod**

<b>Blank (BIL0063-BLK1)</b>		Prepared: 12/04/25 Analyzed: 12/05/25								
Chromium, Hexavalent	ND	0.30	mg/kg wet							
<b>LCS (BIL0063-BS1)</b>		Prepared: 12/04/25 Analyzed: 12/05/25								
Chromium, Hexavalent	25.0	0.30	mg/kg wet	25.0		100	80-120			
<b>Duplicate (BIL0063-DUP1)</b>		Source: 2512010-01 Prepared: 12/04/25 Analyzed: 12/05/25								
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
<b>Matrix Spike (BIL0063-MS1)</b>		Source: 2512010-01 Prepared: 12/04/25 Analyzed: 12/05/25								
Chromium, Hexavalent	35.8	0.30	mg/kg dry	35.2	ND	102	75-125			
<b>Matrix Spike Dup (BIL0063-MSD1)</b>		Source: 2512010-01 Prepared: 12/04/25 Analyzed: 12/05/25								
Chromium, Hexavalent	33.1	0.30	mg/kg dry	34.8	ND	95.0	75-125	7.72	20	

Summit Scientific

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Quandary Consultants  
4480 Garfield St  
Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
Project Manager: Will Blust

**Reported:**  
12/08/25 06:47

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Notes
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**Batch BIL0065 - General Preparation**

**Blank (BIL0065-BLK1)**

Prepared: 12/04/25 Analyzed: 12/05/25

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

**LCS (BIL0065-BS1)**

Prepared: 12/04/25 Analyzed: 12/05/25

Calcium	5.24	0.0500	mg/L wet	5.00	105	70-130
Magnesium	5.59	0.0500	"	5.00	112	70-130
Sodium	5.46	0.0500	"	5.00	109	70-130

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Quandary Consultants  
 4480 Garfield St  
 Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
 Project Manager: Will Blust

**Reported:**  
 12/08/25 06:47

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch BIL0064 - General Preparation**

**Duplicate (BIL0064-DUP1)**

**Source: 2512010-01**

Prepared: 12/04/25 Analyzed: 12/05/25

% Solids	71.6		%		71.8			0.241	20	
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Quandary Consultants  
 4480 Garfield St  
 Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
 Project Manager: Will Blust

**Reported:**  
 12/08/25 06:47

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch BIL0067 - General Preparation**

**Blank (BIL0067-BLK1)**

Prepared: 12/04/25 Analyzed: 12/05/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BIL0067-BS1)**

Prepared: 12/04/25 Analyzed: 12/05/25

Specific Conductance (EC) 1.41 0.0100 mmhos/cm 1.41 99.9 95-105

**Duplicate (BIL0067-DUP1)**

**Source: 2512010-01**

Prepared: 12/04/25 Analyzed: 12/05/25

Specific Conductance (EC) 0.356 0.0100 mmhos/cm 0.356 0.00 20

Summit Scientific

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Quandary Consultants  
 4480 Garfield St  
 Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]  
 Project Manager: Will Blust

**Reported:**  
 12/08/25 06:47

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch BIL0066 - General Preparation**

**LCS (BIL0066-BS1)**

Prepared: 12/04/25 Analyzed: 12/05/25

pH	9.13		pH Units	9.18		99.4	95-105			
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**Duplicate (BIL0066-DUP1)**

**Source: 2512010-01**

Prepared: 12/04/25 Analyzed: 12/05/25

pH	8.24		pH Units	8.24				0.0158	20	
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Summit Scientific

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Quandary Consultants  
4480 Garfield St  
Denver CO, 80237

Project: Bison IV - Fabrizius 33-14

Project Number: [none]  
Project Manager: Will Blust

**Reported:**  
12/08/25 06:47

### Notes and Definitions

QM-05    The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.

DET       Analyte DETECTED

ND       Analyte NOT DETECTED at or above the reporting limit

NR       Not Reported

dry       Sample results reported on a dry weight basis

RPD       Relative Percent Difference