



CTEH

Kyle Lawrence

5120 North Shore Drive

North Little Rock AR 72118

June 09, 2025

Project Name - PROJ-054017

Project Number - PROJ-054017

Attached are your analytical results for PROJ-054017 received by Origins Laboratory June 01, 2025. This project is associated with Origins project number E5F0005-01.

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
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CTEH
5120 North Shore Drive
North Little Rock AR 72118

Kyle Lawrence
Project Number: PROJ-054017
Project: PROJ-054017

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GACO0530T165-1S001	E5F0005-01	Soil	May 30, 2025 14:30	06/01/2025 08:00

Origins Laboratory

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ORIGINS LABORATORY

CTEH
5120 North Shore Drive
North Little Rock AR 72118

Kyle Lawrence
Project Number: PROJ-054017
Project: PROJ-054017

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: ESF0005 Client: CTEH
Client Project ID: PROJ-054017
Checklist Completed by: JAA/JAR Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Date/time completed: 6/11/12 Airbill #: _____
Matrix(s) Received: (Check all that apply): 4 Soil/Solid _____ Water _____ Other: _____
Cooler Number/Temperature: 1 10.3 °C / _____ °C / _____ °C (Describe) _____ °C
Thermometer ID: T007

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input 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 subcooled analytes 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 checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by (Project Manager) JAA

Date/Time Reviewed 6/11/12

Origins Laboratory



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GACO0530T165-1S001
5/30/2025 2:30:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5F0005-01 (Soil)									
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	0.510		0.0996	mg/L	1	B5F0203	06/02/2025	06/03/2025	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5F0224	06/02/2025	06/02/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: <i>o</i> -Terphenyl	50.6 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5F0103	06/01/2025	06/01/2025	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	107 %			70-130		"	"	"	
Surrogate: Toluene-d8	94.8 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	112 %			70-130		"	"	"	

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GACO0530T165-1S001
5/30/2025 2:30:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5F0005-01 (Soil)
Origins Laboratory

Metals by Saturated Paste by EPA 6010

Calcium	1.66		0.499	meq/L	10	[CALC]	06/02/2025	06/04/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B5F0221	06/02/2025	06/02/2025	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	0.007		0.005	"	"	"	"	"	
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U

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GACO0530T165-1S001
5/30/2025 2:30:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5F0005-01 (Soil)
Origins Laboratory

PAH by EPA 8270E extracted via 3580A

Pyrene	ND		0.020	mg/kg	1	B5F0221	06/02/2025	06/02/2025	U
Surrogate: Fluorene-d10	102 %			60-130		"	"	"	
Surrogate: Anthracene-d10	97.2 %			60-130		"	"	"	
Surrogate: Pyrene-d10	98.8 %			60-130		"	"	"	
Surrogate: Benzo (a) pyrene-d12	95.9 %			60-130		"	"	"	

pH in Soil by 9045D

pH	7.40			pH Units	1	B5F0211	06/02/2025	06/03/2025	
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SAR by 20B Saturated Paste

SAR	0.417		0.0100	SAR	1	B5F0206	06/02/2025	06/04/2025	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.256		0.00500	mmhos/cm	1	B5F0211	06/02/2025	06/03/2025	
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Table 915 metals by EPA 6020B

Arsenic	3.89		0.242	mg/kg	10	B5F0233	06/02/2025	06/03/2025	
Barium	73.4		68.5	"	"	"	"	"	
Cadmium	ND		0.317	"	"	"	"	"	
Copper	ND		38.4	"	"	"	"	"	

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GACO0530T165-1S001
5/30/2025 2:30:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5F0005-01 (Soil)									
Origins Laboratory									
Table 915 metals by EPA 6020B									
Lead	14.5		11.7	mg/kg	10	B5F0233	06/02/2025	06/03/2025	
Nickel	ND		21.7	"	"	"	"	"	
Selenium	0.323		0.217	"	"	"	"	"	
Silver	ND		0.668	"	"	"	"	"	
Zinc	ND		309	"	"	"	"	"	

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Classical Chemistry Parameters - 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 B5F0203 - DTPA Sorbitol Preparation

Blank (B5F0203-BLK1)

Prepared: 06/02/2025 Analyzed: 06/03/2025

Boron ND 0.100 mg/L

Duplicate (B5F0203-DUP1)

Source: E5E1061-21

Prepared: 06/02/2025 Analyzed: 06/03/2025

Boron 0.0848 0.101 mg/L 0.0915 7.54 50

Batch B5F0206 - Saturated Paste Metals

Blank (B5F0206-BLK1)

Prepared: 06/02/2025 Analyzed: 06/04/2025

SAR ND 0.0100 SAR

Calcium PPM ND 10.0 mg/L

Magnesium PPM ND 10.0 "

Sodium PPM ND 10.0 "

Duplicate (B5F0206-DUP1)

Source: E5F0001-23

Prepared: 06/02/2025 Analyzed: 06/04/2025

SAR ND 0.0100 SAR ND 200

Calcium PPM 61.6 10.0 mg/L 68.8 11.1 50

Magnesium PPM 3.79 10.0 " 4.15 9.07 50

Sodium PPM 1.11 10.0 " 1.38 21.7 50

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EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B5F0221 - EPA 3580

Blank (B5F0221-BLK1)

Prepared: 06/02/2025 Analyzed: 06/02/2025

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	210		ug/kg	200		103	60-130			
Surrogate: Anthracene-d10	200		"	200		99.5	60-130			
Surrogate: Pyrene-d10	200		"	200		99.9	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		97.0	60-130			

LCS (B5F0221-BS1)

Prepared: 06/02/2025 Analyzed: 06/02/2025

1-Methylnaphthalene	0.227	0.002	mg/kg	0.200		113	70-130			
2-Methylnaphthalene	0.226	0.002	"	0.200		113	70-130			
Acenaphthene	0.223	0.020	"	0.200		111	70-130			
Anthracene	0.217	0.020	"	0.200		109	70-130			

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EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B5F0221 - EPA 3580

LCS (B5F0221-BS1)

Prepared: 06/02/2025 Analyzed: 06/02/2025

Benzo (a) anthracene	0.222	0.005	mg/kg	0.200		111	70-130			
Benzo (a) pyrene	0.216	0.020	"	0.200		108	70-130			
Benzo (b) fluoranthene	0.215	0.020	"	0.200		107	70-130			
Benzo (g,h,i) perylene	0.216	0.020	"	0.200		108	70-130			
Benzo (k) fluoranthene	0.221	0.020	"	0.200		111	70-130			
Chrysene	0.218	0.020	"	0.200		109	70-130			
Dibenz (a,h) anthracene	0.214	0.020	"	0.200		107	70-130			
Fluoranthene	0.224	0.020	"	0.200		112	70-130			
Fluorene	0.223	0.020	"	0.200		112	70-130			
Indeno (1,2,3-cd) pyrene	0.215	0.020	"	0.200		107	70-130			
Naphthalene	0.223	0.002	"	0.200		112	70-130			
Phenanthrene	0.221	0.020	"	0.200		110	70-130			
Pyrene	0.226	0.020	"	0.200		113	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	200		"	200		98.7	60-130			
Surrogate: Pyrene-d10	200		"	200		100	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		97.7	60-130			

Matrix Spike (B5F0221-MS1)

Source: E5F0001-23

Prepared: 06/02/2025 Analyzed: 06/02/2025

1-Methylnaphthalene	0.223	0.002	mg/kg	0.200	ND	112	70-130			
2-Methylnaphthalene	0.220	0.002	"	0.200	ND	110	70-130			
Acenaphthene	0.211	0.020	"	0.200	0.001	105	70-130			
Anthracene	0.217	0.020	"	0.200	ND	109	70-130			
Benzo (a) anthracene	0.219	0.005	"	0.200	0.0009	109	70-130			
Benzo (a) pyrene	0.209	0.020	"	0.200	0.0009	104	70-130			
Benzo (b) fluoranthene	0.211	0.020	"	0.200	0.0008	105	70-130			
Benzo (g,h,i) perylene	0.203	0.020	"	0.200	0.0006	101	70-130			

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EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B5F0221 - EPA 3580

Matrix Spike (B5F0221-MS1)

Source: E5F0001-23

Prepared: 06/02/2025 Analyzed: 06/02/2025

Benzo (k) fluoranthene	0.214	0.020	mg/kg	0.200	ND	107	70-130			
Chrysene	0.205	0.020	"	0.200	0.001	102	70-130			
Dibenz (a,h) anthracene	0.207	0.020	"	0.200	0.0004	103	70-130			
Fluoranthene	0.216	0.020	"	0.200	0.0006	107	70-130			
Fluorene	0.216	0.020	"	0.200	0.0007	108	70-130			
Indeno (1,2,3-cd) pyrene	0.204	0.020	"	0.200	ND	102	70-130			
Naphthalene	0.213	0.002	"	0.200	ND	106	70-130			
Phenanthrene	0.213	0.020	"	0.200	ND	107	70-130			
Pyrene	0.216	0.020	"	0.200	ND	108	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	200		"	200		98.5	60-130			
Surrogate: Pyrene-d10	200		"	200		99.5	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		97.8	60-130			

Matrix Spike Dup (B5F0221-MSD1)

Source: E5F0001-23

Prepared: 06/02/2025 Analyzed: 06/02/2025

1-Methylnaphthalene	0.220	0.002	mg/kg	0.200	ND	110	70-130	1.30	20	
2-Methylnaphthalene	0.222	0.002	"	0.200	ND	111	70-130	1.15	20	
Acenaphthene	0.216	0.020	"	0.200	0.001	107	70-130	2.16	20	
Anthracene	0.205	0.020	"	0.200	ND	102	70-130	5.84	20	
Benzo (a) anthracene	0.222	0.005	"	0.200	0.0009	110	70-130	1.14	20	
Benzo (a) pyrene	0.212	0.020	"	0.200	0.0009	105	70-130	1.12	20	
Benzo (b) fluoranthene	0.208	0.020	"	0.200	0.0008	103	70-130	1.68	20	
Benzo (g,h,i) perylene	0.208	0.020	"	0.200	0.0006	104	70-130	2.43	20	
Benzo (k) fluoranthene	0.215	0.020	"	0.200	ND	108	70-130	0.402	20	
Chrysene	0.217	0.020	"	0.200	0.001	108	70-130	5.89	20	
Dibenz (a,h) anthracene	0.208	0.020	"	0.200	0.0004	104	70-130	0.565	20	
Fluoranthene	0.217	0.020	"	0.200	0.0006	108	70-130	0.499	20	

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EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B5F0221 - EPA 3580

Matrix Spike Dup (B5F0221-MSD1)

Source: E5F0001-23

Prepared: 06/02/2025 Analyzed: 06/02/2025

Fluorene	0.221	0.020	mg/kg	0.200	0.0007	110	70-130	2.15	20	
Indeno (1,2,3-cd) pyrene	0.204	0.020	"	0.200	ND	102	70-130	0.178	20	
Naphthalene	0.210	0.002	"	0.200	ND	105	70-130	1.20	20	
Phenanthrene	0.216	0.020	"	0.200	ND	108	70-130	1.35	20	
Pyrene	0.217	0.020	"	0.200	ND	109	70-130	0.573	20	
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	200		"	200		98.4	60-130			
Surrogate: Pyrene-d10	200		"	200		99.7	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		97.2	60-130			

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Extractable Petroleum Hydrocarbons by 8015D - 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 B5F0224 - EPA 3550B

Blank (B5F0224-BLK1)

Prepared: 06/02/2025 Analyzed: 06/02/2025

Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	22		"	24.9		86.7	50-150			

LCS (B5F0224-BS1)

Prepared: 06/02/2025 Analyzed: 06/02/2025

Diesel (C10-C28)	975	50.0	mg/kg	1000		97.5	70-130			
Residual Range Organics (C28-C40)	1030	200	"	1000		103	70-130			
Surrogate: o-Terphenyl	49		"	49.8		98.7	50-150			

Matrix Spike (B5F0224-MS1)

Source: E5F0001-23

Prepared: 06/02/2025 Analyzed: 06/02/2025

Diesel (C10-C28)	928	50.0	mg/kg	1000	ND	92.8	70-130			
Residual Range Organics (C28-C40)	978	200	"	1000	ND	97.8	70-130			
Surrogate: o-Terphenyl	44		"	49.8		89.3	50-150			

Matrix Spike Dup (B5F0224-MSD1)

Source: E5F0001-23

Prepared: 06/02/2025 Analyzed: 06/02/2025

Diesel (C10-C28)	950	50.0	mg/kg	1000	ND	95.0	70-130	2.30	35	
Residual Range Organics (C28-C40)	1010	200	"	1000	ND	101	70-130	3.70	35	
Surrogate: o-Terphenyl	46		"	49.8		93.4	50-150			

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CTEH
 5120 North Shore Drive
 North Little Rock AR 72118

Kyle Lawrence
 Project Number: PROJ-054017
 Project: PROJ-054017

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 B5F0233 - EPA 3050B

Blank (B5F0233-BLK1)

Prepared: 06/02/2025 Analyzed: 06/03/2025

Arsenic	ND	0.290	mg/kg							
Barium	ND	82.0	"							
Cadmium	ND	0.380	"							
Copper	ND	46.0	"							
Lead	ND	14.0	"							
Nickel	ND	26.0	"							
Selenium	ND	0.260	"							
Silver	ND	0.800	"							
Zinc	ND	370	"							

LCS (B5F0233-BS1)

Prepared: 06/02/2025 Analyzed: 06/03/2025

Arsenic	5.36	0.290	mg/kg	5.00		107	80-120			
Barium	494	82.0	"	500		98.9	80-120			
Cadmium	5.28	0.380	"	5.00		106	80-120			
Copper	50.2	46.0	"	50.0		100	80-120			
Lead	5.05	14.0	"	5.00		101	80-120			
Nickel	5.71	26.0	"	5.00		114	80-120			
Selenium	5.35	0.260	"	5.00		107	80-120			
Silver	5.17	0.800	"	5.00		103	80-120			
Zinc	52.7	370	"	50.0		105	80-120			

Matrix Spike (B5F0233-MS1)

Source: E5F0003-01

Prepared: 06/02/2025 Analyzed: 06/03/2025

Arsenic	10.2	0.273	mg/kg	4.71	5.00	111	75-125			
Barium	670	77.3	"	471	149	110	75-125			
Cadmium	5.37	0.358	"	4.71	0.326	107	75-125			
Copper	61.6	43.3	"	47.1	14.3	101	75-125			
Lead	18.3	13.2	"	4.71	13.9	94.5	75-125			

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Metals by EPA 6000/7000 Series Methods - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5F0233 - EPA 3050B

Matrix Spike (B5F0233-MS1)

Source: E5F0003-01

Prepared: 06/02/2025 Analyzed: 06/03/2025

Nickel	18.2	24.5	mg/kg	4.71	13.0	110	75-125			
Selenium	5.37	0.245	"	4.71	0.407	105	75-125			
Silver	4.87	0.754	"	4.71	0.0536	102	75-125			
Zinc	128	349	"	47.1	70.2	123	75-125			

Matrix Spike Dup (B5F0233-MSD1)

Source: E5F0003-01

Prepared: 06/02/2025 Analyzed: 06/03/2025

Arsenic	9.19	0.267	mg/kg	4.61	5.00	90.9	75-125	10.6	20	
Barium	602	75.5	"	461	149	98.3	75-125	10.6	20	
Cadmium	4.84	0.350	"	4.61	0.326	97.9	75-125	10.4	20	
Copper	55.8	42.4	"	46.1	14.3	90.2	75-125	9.96	20	
Lead	16.2	12.9	"	4.61	13.9	50.6	75-125	12.3	20	QM-07
Nickel	17.0	24.0	"	4.61	13.0	86.6	75-125	6.85	20	
Selenium	4.95	0.240	"	4.61	0.407	98.7	75-125	8.14	20	
Silver	4.29	0.737	"	4.61	0.0536	92.0	75-125	12.6	20	
Zinc	112	341	"	46.1	70.2	91.4	75-125	13.1	20	

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 Project: PROJ-054017

Saturated Paste - 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 B5F0211 - Saturated Paste pH/EC

Blank (B5F0211-BLK1)

Prepared: 06/02/2025 Analyzed: 06/03/2025

Specific Conductance (EC) ND 0.00500 mmhos/cm

Duplicate (B5F0211-DUP1)

Source: E5F0001-23

Prepared: 06/02/2025 Analyzed: 06/03/2025

pH 7.96 pH Units 7.89 0.883 25

Specific Conductance (EC) 0.336 0.00500 mmhos/cm 0.368 9.17 25

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 Project: PROJ-054017

Volatile Organic Compounds by GC/MS SW846 8260D - 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 B5F0103 - EPA 5030 (soil)

Blank (B5F0103-BLK1)

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

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

Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.2	70-130
Surrogate: Toluene-d8	0.12		"	0.125		98.1	70-130
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		107	70-130

LCS (B5F0103-BS1)

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

1,2,4-Trimethylbenzene	0.106	0.00200	mg/kg	0.100		106	70-130
1,3,5-Trimethylbenzene	0.105	0.00200	"	0.100		105	70-130
Benzene	0.104	0.00200	"	0.100		104	70-130
Ethylbenzene	0.106	0.00200	"	0.100		106	70-130
Naphthalene	0.0932	0.00380	"	0.100		93.2	70-130
Toluene	0.102	0.00200	"	0.100		102	70-130
o-Xylene	0.105	0.00200	"	0.100		105	70-130
m,p-Xylene	0.214	0.00400	"	0.200		107	70-130

Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.2	70-130
Surrogate: Toluene-d8	0.12		"	0.125		96.5	70-130
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130

Matrix Spike (B5F0103-MS1)

Source: E5F0001-23

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

1,2,4-Trimethylbenzene	0.0861	0.00200	mg/kg	0.100	ND	86.1	70-130
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 Project Number: PROJ-054017
 Project: PROJ-054017

Volatile Organic Compounds by GC/MS SW846 8260D - 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 B5F0103 - EPA 5030 (soil)

Matrix Spike (B5F0103-MS1)

Source: E5F0001-23

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

1,3,5-Trimethylbenzene	0.0845	0.00200	mg/kg	0.100	ND	84.5	70-130			
Benzene	0.0840	0.00200	"	0.100	ND	84.0	70-130			
Ethylbenzene	0.0865	0.00200	"	0.100	ND	86.5	70-130			
Naphthalene	0.0832	0.00380	"	0.100	0.00234	80.9	70-130			
Toluene	0.0827	0.00200	"	0.100	ND	82.7	70-130			
o-Xylene	0.0875	0.00200	"	0.100	ND	87.5	70-130			
m,p-Xylene	0.174	0.00400	"	0.200	ND	87.1	70-130			

Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	70-130			

Matrix Spike Dup (B5F0103-MSD1)

Source: E5F0001-23

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

1,2,4-Trimethylbenzene	0.103	0.00200	mg/kg	0.100	ND	103	70-130	17.6	20	
1,3,5-Trimethylbenzene	0.101	0.00200	"	0.100	ND	101	70-130	17.8	20	
Benzene	0.107	0.00200	"	0.100	ND	107	70-130	23.7	20	QR-02
Ethylbenzene	0.106	0.00200	"	0.100	ND	106	70-130	19.9	20	
Naphthalene	0.114	0.00380	"	0.100	0.00234	111	70-130	31.1	20	QR-02
Toluene	0.104	0.00200	"	0.100	ND	104	70-130	22.4	20	QR-02
o-Xylene	0.106	0.00200	"	0.100	ND	106	70-130	18.8	20	
m,p-Xylene	0.213	0.00400	"	0.200	ND	107	70-130	20.1	20	QR-02

Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

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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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