



CTEH

June 10, 2025

Kyle Lawrence

5120 North Shore Drive

North Little Rock AR 72118

Project Name - PROJ-054017

Project Number - PROJ-054017

Attached are your analytical results for PROJ-054017 received by Origins Laboratory May 02, 2025. This project is associated with Origins project number E5E0142-01.

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
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GACO0502T129-1S001	E5E0142-01	Soil	May 2, 2025 8:50	05/02/2025 20:10
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All Chromium Hexavalent samples in this workorder were prepared by EPA 3060A at Enthalpy Denver and analyzed by EPA 7199 at subcontract lab: Enthalpy Richmond. Both laboratories are TNI accredited for this analysis and meets statutory and regulatory requirements for this analysis. See NCM E25005.

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Jen Pellegrini For Jordan A. Bynon, Project Manager

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: FF00142 Client: CTEH
 Client Project ID: 054017
 Checklist Completed by: EJP/DSM Shipped Via: HO
 Date/time completed: 5/19/15 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1/1 * c (Describe)
 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)?}	<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) JB Date/Time Reviewed 5/15/15

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Kyle Lawrence
 Project Number: PROJ-054017
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GACO0502T129-1S001
5/2/2025 8:50:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5E0142-01 (Soil)									
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	0.573		0.100	mg/L	1	B5E0509	05/05/2025	05/06/2025	
Chromium Hexavalent by EPA 7199									
Hexavalent Chromium	ND		0.251	mg/kg	1	B5E0535	05/05/2025	05/23/2025	U
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5E0543	05/05/2025	05/05/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	82.4 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5E0504	05/05/2025	05/06/2025	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

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GACO0502T129-1S001
5/2/2025 8:50:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5E0142-01 (Soil)
Origins Laboratory

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	100 %			70-130		B5E0504	05/05/2025	05/06/2025	
Surrogate: Toluene-d8	98.0 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	99.0 %			70-130		"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.51		0.499	meq/L	10	[CALC]	05/05/2025	05/07/2025	
Magnesium	1.14		0.823	"	"	"	"	"	
Sodium	0.462		0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B5E0521	05/05/2025	05/05/2025	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 (k) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	U

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GACO0502T129-1S001
5/2/2025 8:50:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5E0142-01 (Soil)
Origins Laboratory

PAH by EPA 8270E extracted via 3580A

Fluoranthene	ND		0.020	mg/kg	1	B5E0521	05/05/2025	05/05/2025	U
Fluorene	ND		0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	100 %			60-130		"	"	"	
Surrogate: Anthracene-d10	95.8 %			60-130		"	"	"	
Surrogate: Pyrene-d10	96.1 %			60-130		"	"	"	
Surrogate: Benzo (a) pyrene-d12	102 %			60-130		"	"	"	

pH in Soil by 9045D

pH	8.27			pH Units	1	B5E0520	05/05/2025	05/06/2025	
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SAR by 20B Saturated Paste

SAR	0.402		0.0100	SAR	1	B5E0513	05/05/2025	05/07/2025	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.421		0.00500	mmhos/cm	1	B5E0520	05/05/2025	05/06/2025	
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Table 915 metals by EPA 6020B

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GACO0502T129-1S001
5/2/2025 8:50:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5E0142-01 (Soil)
Origins Laboratory

Table 915 metals by EPA 6020B

Arsenic	4.32		0.265	mg/kg	10	B5E0546	05/05/2025	05/06/2025	
Barium	114		74.9	"	"	"	"	"	
Cadmium	ND		0.347	"	"	"	"	"	U
Copper	ND		42.0	"	"	"	"	"	U
Lead	ND		12.8	"	"	"	"	"	U
Nickel	ND		23.8	"	"	"	"	"	U
Selenium	ND		0.238	"	"	"	"	"	U
Silver	ND		0.731	"	"	"	"	"	U
Zinc	ND		338	"	"	"	"	"	U

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***** DEFAULT GENERAL METHOD *** - Quality Control**
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B5E0535 - EPA 3060A										
Blank (B5E0535-BLK1)										
					Prepared: 05/05/2025 Analyzed: 05/22/2025					
Hexavalent Chromium	ND	0.250	mg/kg							U
LCS (B5E0535-BS1)										
					Prepared: 05/05/2025 Analyzed: 05/23/2025					
Hexavalent Chromium	2.39	0.250	mg/kg	2.50		95.4	80-120			
Matrix Spike (B5E0535-MS1)										
					Source: E5E0141-17 Prepared: 05/05/2025 Analyzed: 05/23/2025					
Hexavalent Chromium	2.05	0.252	mg/kg	2.52	ND	81.3	75-125			
Matrix Spike (B5E0535-MS2)										
					Source: E5E0141-17 Prepared: 05/05/2025 Analyzed: 05/23/2025					
Hexavalent Chromium	223	25.4	mg/kg	287	ND	77.9	75-125			
Matrix Spike Dup (B5E0535-MSD1)										
					Source: E5E0141-17 Prepared: 05/05/2025 Analyzed: 05/23/2025					
Hexavalent Chromium	2.06	0.253	mg/kg	2.53	ND	81.3	75-125	0.507	200	
Post Spike (B5E0535-PS1)										
					Source: E5E0141-17 Prepared: 05/05/2025 Analyzed: 05/29/2025					
Hexavalent Chromium	55.1		ug/L	50.0	0.716	109	80-120			

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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 B5E0509 - DTPA Sorbitol Preparation

Blank (B5E0509-BLK1)

Prepared: 05/05/2025 Analyzed: 05/06/2025

Boron	ND	0.100	mg/L							U
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Duplicate (B5E0509-DUP1)

Source: E5E0141-18

Prepared: 05/05/2025 Analyzed: 05/06/2025

Boron	0.697	0.0997	mg/L		0.699			0.343	50	
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Batch B5E0513 - Saturated Paste Metals

Blank (B5E0513-BLK1)

Prepared: 05/05/2025 Analyzed: 05/07/2025

SAR	ND	0.0100	SAR							U
Calcium PPM	ND	10.0	mg/L							U
Magnesium PPM	ND	10.0	"							U
Sodium PPM	ND	10.0	"							U

Duplicate (B5E0513-DUP1)

Source: E5E0141-18

Prepared: 05/05/2025 Analyzed: 05/07/2025

Calcium PPM	72.0	10.0	mg/L		65.7			9.15	50	
SAR	ND	0.0100	SAR		ND				200	U
Magnesium PPM	24.1	10.0	mg/L		21.8			9.89	50	
Sodium PPM	38.9	10.0	"		39.2			0.743	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 B5E0521 - EPA 3580

Blank (B5E0521-BLK1)

Prepared: 05/05/2025 Analyzed: 05/05/2025

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	200		ug/kg	200		98.2	60-130			
Surrogate: Anthracene-d10	190		"	200		95.8	60-130			
Surrogate: Pyrene-d10	200		"	200		99.6	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		104	60-130			

LCS (B5E0521-BS1)

Prepared: 05/05/2025 Analyzed: 05/05/2025

1-Methylnaphthalene	0.180	0.002	mg/kg	0.200		89.8	70-130			
2-Methylnaphthalene	0.181	0.002	"	0.200		90.7	70-130			
Acenaphthene	0.194	0.020	"	0.200		96.8	70-130			
Anthracene	0.183	0.020	"	0.200		91.3	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 B5E0521 - EPA 3580

LCS (B5E0521-BS1)

Prepared: 05/05/2025 Analyzed: 05/05/2025

Benzo (a) anthracene	0.213	0.005	mg/kg	0.200		106	70-130			
Benzo (a) pyrene	0.197	0.020	"	0.200		98.3	70-130			
Benzo (b) fluoranthene	0.204	0.020	"	0.200		102	70-130			
Benzo (g,h,i) perylene	0.190	0.020	"	0.200		95.1	70-130			
Benzo (k) fluoranthene	0.183	0.020	"	0.200		91.6	70-130			
Chrysene	0.203	0.020	"	0.200		101	70-130			
Dibenz (a,h) anthracene	0.205	0.020	"	0.200		102	70-130			
Fluoranthene	0.195	0.020	"	0.200		97.7	70-130			
Fluorene	0.193	0.020	"	0.200		96.5	70-130			
Indeno (1,2,3-cd) pyrene	0.198	0.020	"	0.200		98.9	70-130			
Naphthalene	0.191	0.002	"	0.200		95.7	70-130			
Phenanthrene	0.194	0.020	"	0.200		97.2	70-130			
Pyrene	0.199	0.020	"	0.200		99.7	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	190		"	200		96.7	60-130			
Surrogate: Pyrene-d10	190		"	200		96.1	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130			

Matrix Spike (B5E0521-MS1)

Source: E5E0141-06

Prepared: 05/05/2025 Analyzed: 05/05/2025

1-Methylnaphthalene	0.192	0.002	mg/kg	0.200	0.002	94.9	70-130			
2-Methylnaphthalene	0.195	0.002	"	0.200	ND	97.3	70-130			
Acenaphthene	0.207	0.020	"	0.200	ND	104	70-130			
Anthracene	0.231	0.020	"	0.200	ND	115	70-130			
Benzo (a) anthracene	0.232	0.005	"	0.200	0.001	115	70-130			
Benzo (a) pyrene	0.219	0.020	"	0.200	0.0007	109	70-130			
Benzo (b) fluoranthene	0.227	0.020	"	0.200	ND	113	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 B5E0521 - EPA 3580

Matrix Spike (B5E0521-MS1)

Source: E5E0141-06

Prepared: 05/05/2025 Analyzed: 05/05/2025

Benzo (k) fluoranthene	0.225	0.020	mg/kg	0.200	ND	112	70-130			
Chrysene	0.212	0.020	"	0.200	0.0005	106	70-130			
Dibenz (a,h) anthracene	0.233	0.020	"	0.200	ND	117	70-130			
Fluoranthene	0.213	0.020	"	0.200	ND	106	70-130			
Fluorene	0.207	0.020	"	0.200	ND	103	70-130			
Indeno (1,2,3-cd) pyrene	0.209	0.020	"	0.200	0.001	104	70-130			
Naphthalene	0.205	0.002	"	0.200	ND	103	70-130			
Phenanthrene	0.207	0.020	"	0.200	ND	104	70-130			
Pyrene	0.207	0.020	"	0.200	ND	103	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	190		"	200		96.0	60-130			
Surrogate: Pyrene-d10	190		"	200		94.6	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		104	60-130			

Matrix Spike Dup (B5E0521-MSD1)

Source: E5E0141-06

Prepared: 05/05/2025 Analyzed: 05/05/2025

1-Methylnaphthalene	0.190	0.002	mg/kg	0.200	0.002	93.9	70-130	1.01	20	
2-Methylnaphthalene	0.189	0.002	"	0.200	ND	94.3	70-130	3.12	20	
Acenaphthene	0.201	0.020	"	0.200	ND	101	70-130	2.79	20	
Anthracene	0.207	0.020	"	0.200	ND	103	70-130	10.8	20	
Benzo (a) anthracene	0.219	0.005	"	0.200	0.001	109	70-130	5.72	20	
Benzo (a) pyrene	0.221	0.020	"	0.200	0.0007	110	70-130	0.827	20	
Benzo (b) fluoranthene	0.233	0.020	"	0.200	ND	116	70-130	2.59	20	
Benzo (g,h,i) perylene	0.201	0.020	"	0.200	0.0006	100	70-130	0.776	20	
Benzo (k) fluoranthene	0.211	0.020	"	0.200	ND	105	70-130	6.53	20	
Chrysene	0.207	0.020	"	0.200	0.0005	103	70-130	2.17	20	
Dibenz (a,h) anthracene	0.236	0.020	"	0.200	ND	118	70-130	1.05	20	
Fluoranthene	0.211	0.020	"	0.200	ND	105	70-130	0.795	20	

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Jen Pellegrini For Jordan A. Bynon, Project Manager



CTEH
 5120 North Shore Drive
 North Little Rock AR 72118

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

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 B5E0521 - EPA 3580

Matrix Spike Dup (B5E0521-MSD1)

Source: E5E0141-06

Prepared: 05/05/2025 Analyzed: 05/05/2025

Fluorene	0.201	0.020	mg/kg	0.200	ND	100	70-130	2.80	20	
Indeno (1,2,3-cd) pyrene	0.210	0.020	"	0.200	0.001	104	70-130	0.499	20	
Naphthalene	0.203	0.002	"	0.200	ND	101	70-130	1.33	20	
Phenanthrene	0.207	0.020	"	0.200	ND	103	70-130	0.400	20	
Pyrene	0.205	0.020	"	0.200	ND	102	70-130	1.03	20	
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	190		"	200		93.5	60-130			
Surrogate: Pyrene-d10	190		"	200		95.5	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		104	60-130			

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

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 B5E0543 - EPA 3550B

Blank (B5E0543-BLK1)

Prepared: 05/05/2025 Analyzed: 05/05/2025

Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	20		"	24.9		79.4	50-150			

LCS (B5E0543-BS1)

Prepared: 05/05/2025 Analyzed: 05/05/2025

Diesel (C10-C28)	925	50.0	mg/kg	1000		92.5	70-130			
Residual Range Organics (C28-C40)	919	200	"	1000		91.9	70-130			
Surrogate: o-Terphenyl	53		"	49.8		106	50-150			

Matrix Spike (B5E0543-MS1)

Source: E5E0135-01

Prepared: 05/05/2025 Analyzed: 05/05/2025

Diesel (C10-C28)	976	50.0	mg/kg	1000	ND	97.6	70-130			
Residual Range Organics (C28-C40)	1010	200	"	1000	ND	101	70-130			
Surrogate: o-Terphenyl	52		"	49.8		104	50-150			

Matrix Spike Dup (B5E0543-MSD1)

Source: E5E0135-01

Prepared: 05/05/2025 Analyzed: 05/05/2025

Diesel (C10-C28)	1030	50.0	mg/kg	1000	ND	103	70-130	5.82	35	
Residual Range Organics (C28-C40)	1070	200	"	1000	ND	107	70-130	5.42	35	
Surrogate: o-Terphenyl	56		"	49.8		113	50-150			

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CTEH
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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 B5E0546 - EPA 3050B

Blank (B5E0546-BLK1)

Prepared: 05/05/2025 Analyzed: 05/06/2025

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

LCS (B5E0546-BS1)

Prepared: 05/05/2025 Analyzed: 05/06/2025

Arsenic	5.16	0.290	mg/kg	5.00		103	80-120			
Barium	536	82.0	"	500		107	80-120			
Cadmium	5.33	0.380	"	5.00		107	80-120			
Copper	55.2	46.0	"	50.0		110	80-120			
Lead	5.27	14.0	"	5.00		105	80-120			U
Nickel	5.38	26.0	"	5.00		108	80-120			U
Selenium	5.15	0.260	"	5.00		103	80-120			
Silver	4.96	0.800	"	5.00		99.3	80-120			
Zinc	53.3	370	"	50.0		107	80-120			U

Matrix Spike (B5E0546-MS1)

Source: E5E0163-40

Prepared: 05/05/2025 Analyzed: 05/06/2025

Arsenic	15.5	0.267	mg/kg	4.61	4.96	229	75-125			QM-07
Barium	594	75.5	"	461	87.6	110	75-125			
Cadmium	5.26	0.350	"	4.61	0.155	111	75-125			
Copper	60.3	42.4	"	46.1	7.64	114	75-125			
Lead	12.4	12.9	"	4.61	7.11	116	75-125			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 B5E0546 - EPA 3050B

Matrix Spike (B5E0546-MS1)

Source: E5E0163-40

Prepared: 05/05/2025 Analyzed: 05/06/2025

Nickel	15.6	24.0	mg/kg	4.61	7.30	179	75-125			QM-07, U
Selenium	5.11	0.240	"	4.61	0.201	107	75-125			
Silver	4.64	0.737	"	4.61	0.0259	100	75-125			
Zinc	99.8	341	"	46.1	40.5	129	75-125			QM-07, U

Matrix Spike Dup (B5E0546-MSD1)

Source: E5E0163-40

Prepared: 05/05/2025 Analyzed: 05/06/2025

Arsenic	9.19	0.253	mg/kg	4.37	4.96	97.0	75-125	51.2	20	QR-DUP
Barium	561	71.6	"	437	87.6	108	75-125	5.84	20	
Cadmium	4.79	0.332	"	4.37	0.155	106	75-125	9.30	20	
Copper	55.0	40.2	"	43.7	7.64	108	75-125	9.10	20	
Lead	13.8	12.2	"	4.37	7.11	153	75-125	10.3	20	QM-07
Nickel	12.4	22.7	"	4.37	7.30	116	75-125	23.0	20	QR-DUP, U
Selenium	4.67	0.227	"	4.37	0.201	102	75-125	9.01	20	
Silver	4.30	0.699	"	4.37	0.0259	97.9	75-125	7.49	20	
Zinc	90.4	323	"	43.7	40.5	114	75-125	9.88	20	U

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Jen Pellegrini For Jordan A. Bynon, Project Manager



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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 B5E0520 - Saturated Paste pH/EC

Blank (B5E0520-BLK1)

Prepared: 05/05/2025 Analyzed: 05/06/2025

Specific Conductance (EC)	ND	0.00500	mmhos/cm							U
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Duplicate (B5E0520-DUP1)

Source: E5E0141-18

Prepared: 05/05/2025 Analyzed: 05/06/2025

pH	7.86		pH Units		7.83		0.382		25	
Specific Conductance (EC)	0.801	0.00500	mmhos/cm		0.730		9.37		25	

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 Project Number: PROJ-054017
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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 B5E0504 - EPA 5030 (soil)

Blank (B5E0504-BLK1)

Prepared: 05/05/2025 Analyzed: 05/05/2025

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	0.13		"	0.125	107	70-130				
Surrogate: Toluene-d8	0.12		"	0.125	97.8	70-130				
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	98.5	70-130				

LCS (B5E0504-BS1)

Prepared: 05/05/2025 Analyzed: 05/05/2025

1,2,4-Trimethylbenzene	0.112	0.00200	mg/kg	0.100	112	70-130				
1,3,5-Trimethylbenzene	0.112	0.00200	"	0.100	112	70-130				
Benzene	0.0959	0.00200	"	0.100	95.9	70-130				
Ethylbenzene	0.106	0.00200	"	0.100	106	70-130				
Naphthalene	0.0817	0.00380	"	0.100	81.7	70-130				
Toluene	0.0929	0.00200	"	0.100	92.9	70-130				
o-Xylene	0.109	0.00200	"	0.100	109	70-130				
m,p-Xylene	0.215	0.00400	"	0.200	108	70-130				

Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125	87.8	70-130				
Surrogate: Toluene-d8	0.12		"	0.125	96.8	70-130				
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	96.3	70-130				

Matrix Spike (B5E0504-MS1)

Source: E5E0141-06

Prepared: 05/05/2025 Analyzed: 05/05/2025

1,2,4-Trimethylbenzene	0.102	0.00200	mg/kg	0.100	ND	102	70-130			
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Jen Pellegrini For Jordan A. Bynon, Project Manager



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 North Little Rock AR 72118

Kyle Lawrence
 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 B5E0504 - EPA 5030 (soil)

Matrix Spike (B5E0504-MS1)		Source: E5E0141-06			Prepared: 05/05/2025 Analyzed: 05/05/2025					
1,3,5-Trimethylbenzene	0.104	0.00200	mg/kg	0.100	ND	104	70-130			
Benzene	0.0868	0.00200	"	0.100	ND	86.8	70-130			
Ethylbenzene	0.102	0.00200	"	0.100	ND	102	70-130			
Naphthalene	0.0551	0.00380	"	0.100	ND	55.1	70-130			QM-07
Toluene	0.0905	0.00200	"	0.100	ND	90.5	70-130			
o-Xylene	0.104	0.00200	"	0.100	ND	104	70-130			
m,p-Xylene	0.209	0.00400	"	0.200	ND	104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.096		"	0.125		76.6	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.3	70-130			

Matrix Spike Dup (B5E0504-MSD1)		Source: E5E0141-06			Prepared: 05/05/2025 Analyzed: 05/05/2025					
1,2,4-Trimethylbenzene	0.0834	0.00200	mg/kg	0.100	ND	83.4	70-130	20.0	20	
1,3,5-Trimethylbenzene	0.0833	0.00200	"	0.100	ND	83.3	70-130	21.9	20	QR-02
Benzene	0.0789	0.00200	"	0.100	ND	78.9	70-130	9.51	20	
Ethylbenzene	0.0845	0.00200	"	0.100	ND	84.5	70-130	19.3	20	
Naphthalene	0.0613	0.00380	"	0.100	ND	61.3	70-130	10.6	20	QM-07
Toluene	0.0772	0.00200	"	0.100	ND	77.2	70-130	15.8	20	
o-Xylene	0.0876	0.00200	"	0.100	ND	87.6	70-130	17.3	20	
m,p-Xylene	0.170	0.00400	"	0.200	ND	85.1	70-130	20.5	20	QR-02
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		84.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.5	70-130			

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Jen Pellegrini For Jordan A. Bynon, Project Manager



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North Little Rock AR 72118

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

Notes and Definitions

U Sample is Non-Detect.

QR-DUP RPD exceeds QC acceptance criteria, this indicates source sample is not homogenous.

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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