



CTEH

May 27, 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 April 28, 2025. This project is associated with Origins project number E5D0812-01.

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



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645



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
GACO0428T160-1S001	E5D0812-01	Soil	April 28, 2025 10:05	04/28/2025 19:57

Origins Laboratory

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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: ESD0812

Client: CTEH

Client Project ID: PROJ-054017

Checklist Completed by: SKM / SKW

Shipped Via: TID

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 04/29/25

Airbill #: N/A

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

Water

Other:

(Describe)

Cooler Number/Temperature: 1 / 0.3 °C

Thermometer ID: T-007

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 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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by (Project Manager) SKW

Date/Time Reviewed 04/29/25

Origins Laboratory



Jen Pellegrini For Jordan A. Bynon, Project Manager

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

GACO0428T160-1S001
4/28/2025 10:05:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5D0812-01 (Soil)									
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	2.60		0.100	mg/L	1	B5D2910	04/29/2025	05/01/2025	
Chromium Hexavalent by EPA 7199									
Hexavalent Chromium	ND		0.248	mg/kg	1	B5D2913	04/29/2025	05/12/2025	U
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5D2915	04/29/2025	04/29/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	76.8 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5D2912	04/29/2025	04/29/2025	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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GACO0428T160-1S001
4/28/2025 10:05:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0812-01 (Soil)
Origins Laboratory

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	108 %			70-130		B5D2912	04/29/2025	04/29/2025	
Surrogate: Toluene-d8	97.7 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	94.2 %			70-130		"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	15.4		0.499	meq/L	10	[CALC]	04/29/2025	05/01/2025	
Magnesium	10.1		0.823	"	"	"	"	"	
Sodium	4.03		0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B5D2916	04/29/2025	05/01/2025	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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4/28/2025 10:05:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0812-01 (Soil)
Origins Laboratory

PAH by EPA 8270E extracted via 3580A

Fluoranthene	ND		0.020	mg/kg	1	B5D2916	04/29/2025	05/01/2025	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	99.5 %			60-130		"	"	"	
Surrogate: Anthracene-d10	93.0 %			60-130		"	"	"	
Surrogate: Pyrene-d10	96.1 %			60-130		"	"	"	
Surrogate: Benzo (a) pyrene-d12	99.6 %			60-130		"	"	"	

pH in Soil by 9045D

pH	8.31			pH Units	1	B5D2911	04/29/2025	05/01/2025	
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SAR by 20B Saturated Paste

SAR	1.13		0.0100	SAR	1	B5D2909	04/29/2025	05/01/2025	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	3.73		0.00500	mmhos/cm	1	B5D2911	04/29/2025	05/01/2025	
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Table 915 metals by EPA 6020B

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4/28/2025 10:05:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0812-01 (Soil)
Origins Laboratory

Table 915 metals by EPA 6020B

Arsenic	9.30		0.259	mg/kg	10	B5D2908	04/29/2025	04/30/2025	
Barium	135		73.2	"	"	"	"	"	
Cadmium	0.367		0.339	"	"	"	"	"	
Copper	ND		41.0	"	"	"	"	"	U
Lead	14.4		12.5	"	"	"	"	"	
Nickel	ND		23.2	"	"	"	"	"	U
Selenium	0.636		0.232	"	"	"	"	"	
Silver	ND		0.714	"	"	"	"	"	U
Zinc	ND		330	"	"	"	"	"	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 B5D2913 - EPA 3060A										
Blank (B5D2913-BLK1)										
					Prepared: 04/29/2025 Analyzed: 05/23/2025					
Hexavalent Chromium	ND	0.250	mg/kg							U
LCS (B5D2913-BS1)										
					Prepared: 04/29/2025 Analyzed: 05/12/2025					
Hexavalent Chromium	2.13	0.250	mg/kg	2.50		85.4	80-120			
Matrix Spike (B5D2913-MS1)										
					Source: E5D0816-02					
					Prepared: 04/29/2025 Analyzed: 05/12/2025					
Hexavalent Chromium	63.5	25.6	mg/kg	2.56	ND	NR	75-125			QM-14
Matrix Spike (B5D2913-MS2)										
					Source: E5D0816-02					
					Prepared: 04/29/2025 Analyzed: 05/12/2025					
Hexavalent Chromium	1.36	0.253	mg/kg	262	ND	0.518	75-125			QM-14
Matrix Spike Dup (B5D2913-MSD1)										
					Source: E5D0816-02					
					Prepared: 04/29/2025 Analyzed: 05/12/2025					
Hexavalent Chromium	0.479	0.244	mg/kg	2.44	ND	19.6	75-125	197	200	QM-14
Post Spike (B5D2913-PS1)										
					Source: E5D0816-02					
					Prepared: 04/29/2025 Analyzed: 05/12/2025					
Hexavalent Chromium	44.1		ug/L	50.0	0.00	88.2	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 B5D2909 - Saturated Paste Metals

Blank (B5D2909-BLK1)

Prepared: 04/29/2025 Analyzed: 05/01/2025

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

Duplicate (B5D2909-DUP1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 05/01/2025

Calcium PPM	326	10.0	mg/L		269			18.9	50	
SAR	ND	0.0100	SAR		3.29				200	U
Magnesium PPM	253	10.0	mg/L		214			16.7	50	
Sodium PPM	357	10.0	"		298			18.0	50	

Batch B5D2910 - DTPA Sorbitol Preparation

Blank (B5D2910-BLK1)

Prepared: 04/29/2025 Analyzed: 05/01/2025

Boron	ND	0.100	mg/L							U
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Duplicate (B5D2910-DUP1)

Source: E5D0781-01

Prepared: 04/29/2025 Analyzed: 05/01/2025

Boron	1.48	0.0996	mg/L		1.44			2.82	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 B5D2916 - EPA 3580

Blank (B5D2916-BLK1)

Prepared: 04/29/2025 Analyzed: 04/30/2025

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		98.0	60-130			
Surrogate: Anthracene-d10	190		"	200		96.0	60-130			
Surrogate: Pyrene-d10	210		"	200		103	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		101	60-130			

LCS (B5D2916-BS1)

Prepared: 04/29/2025 Analyzed: 04/30/2025

1-Methylnaphthalene	0.184	0.002	mg/kg	0.200		92.2	70-130			
2-Methylnaphthalene	0.184	0.002	"	0.200		92.2	70-130			
Acenaphthene	0.180	0.020	"	0.200		89.9	70-130			
Anthracene	0.164	0.020	"	0.200		82.1	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 B5D2916 - EPA 3580

LCS (B5D2916-BS1)

Prepared: 04/29/2025 Analyzed: 04/30/2025

Benzo (a) anthracene	0.181	0.005	mg/kg	0.200		90.4	70-130			
Benzo (a) pyrene	0.185	0.020	"	0.200		92.6	70-130			
Benzo (b) fluoranthene	0.191	0.020	"	0.200		95.7	70-130			
Benzo (g,h,i) perylene	0.201	0.020	"	0.200		100	70-130			
Benzo (k) fluoranthene	0.194	0.020	"	0.200		97.2	70-130			
Chrysene	0.190	0.020	"	0.200		94.8	70-130			
Dibenz (a,h) anthracene	0.194	0.020	"	0.200		97.2	70-130			
Fluoranthene	0.193	0.020	"	0.200		96.3	70-130			
Fluorene	0.177	0.020	"	0.200		88.3	70-130			
Indeno (1,2,3-cd) pyrene	0.233	0.020	"	0.200		116	70-130			
Naphthalene	0.194	0.002	"	0.200		97.1	70-130			
Phenanthrene	0.170	0.020	"	0.200		85.2	70-130			
Pyrene	0.192	0.020	"	0.200		96.1	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	180		"	200		92.3	60-130			
Surrogate: Pyrene-d10	230		"	200		113	60-130			
Surrogate: Benzo (a) pyrene-d12	220		"	200		111	60-130			

Matrix Spike (B5D2916-MS1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 05/01/2025

1-Methylnaphthalene	0.203	0.002	mg/kg	0.200	ND	102	70-130			
2-Methylnaphthalene	0.207	0.002	"	0.200	ND	103	70-130			
Acenaphthene	0.200	0.020	"	0.200	0.0006	99.8	70-130			
Anthracene	0.206	0.020	"	0.200	0.0005	103	70-130			
Benzo (a) anthracene	0.216	0.005	"	0.200	0.002	107	70-130			
Benzo (a) pyrene	0.243	0.020	"	0.200	0.004	120	70-130			
Benzo (b) fluoranthene	0.235	0.020	"	0.200	0.002	116	70-130			
Benzo (g,h,i) perylene	0.199	0.020	"	0.200	0.002	98.2	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 B5D2916 - EPA 3580

Matrix Spike (B5D2916-MS1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 05/01/2025

Benzo (k) fluoranthene	0.212	0.020	mg/kg	0.200	0.0008	106	70-130			
Chrysene	0.214	0.020	"	0.200	0.003	106	70-130			
Dibenz (a,h) anthracene	0.233	0.020	"	0.200	0.0004	116	70-130			
Fluoranthene	0.216	0.020	"	0.200	0.003	106	70-130			
Fluorene	0.196	0.020	"	0.200	0.0002	98.1	70-130			
Indeno (1,2,3-cd) pyrene	0.208	0.020	"	0.200	0.002	103	70-130			
Naphthalene	0.201	0.002	"	0.200	ND	101	70-130			
Phenanthrene	0.207	0.020	"	0.200	0.001	103	70-130			
Pyrene	0.210	0.020	"	0.200	0.003	103	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		97.6	60-130			
Surrogate: Anthracene-d10	190		"	200		93.1	60-130			
Surrogate: Pyrene-d10	190		"	200		94.6	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		106	60-130			

Matrix Spike Dup (B5D2916-MSD1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 05/01/2025

1-Methylnaphthalene	0.208	0.002	mg/kg	0.200	ND	104	70-130	2.35	20	
2-Methylnaphthalene	0.210	0.002	"	0.200	ND	105	70-130	1.53	20	
Acenaphthene	0.202	0.020	"	0.200	0.0006	101	70-130	1.07	20	
Anthracene	0.229	0.020	"	0.200	0.0005	114	70-130	10.5	20	
Benzo (a) anthracene	0.230	0.005	"	0.200	0.002	114	70-130	6.44	20	
Benzo (a) pyrene	0.236	0.020	"	0.200	0.004	116	70-130	2.79	20	
Benzo (b) fluoranthene	0.244	0.020	"	0.200	0.002	121	70-130	3.81	20	
Benzo (g,h,i) perylene	0.201	0.020	"	0.200	0.002	99.4	70-130	1.16	20	
Benzo (k) fluoranthene	0.223	0.020	"	0.200	0.0008	111	70-130	5.09	20	
Chrysene	0.216	0.020	"	0.200	0.003	107	70-130	0.973	20	
Dibenz (a,h) anthracene	0.237	0.020	"	0.200	0.0004	118	70-130	1.53	20	
Fluoranthene	0.218	0.020	"	0.200	0.003	108	70-130	1.17	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 B5D2916 - EPA 3580

Matrix Spike Dup (B5D2916-MSD1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 05/01/2025

Fluorene	0.198	0.020	mg/kg	0.200	0.0002	98.8	70-130	0.730	20	
Indeno (1,2,3-cd) pyrene	0.206	0.020	"	0.200	0.002	102	70-130	0.918	20	
Naphthalene	0.205	0.002	"	0.200	ND	102	70-130	1.59	20	
Phenanthrene	0.209	0.020	"	0.200	0.001	104	70-130	0.771	20	
Pyrene	0.210	0.020	"	0.200	0.003	103	70-130	0.106	20	
Surrogate: Fluorene-d10	200		ug/kg	200		97.7	60-130			
Surrogate: Anthracene-d10	190		"	200		94.9	60-130			
Surrogate: Pyrene-d10	190		"	200		95.6	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		106	60-130			

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Jen Pellegrini For Jordan A. Bynon, Project Manager



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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 B5D2915 - EPA 3550B

Blank (B5D2915-BLK1)

Prepared: 04/29/2025 Analyzed: 04/29/2025

Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	23		"	24.9		91.0	50-150			

LCS (B5D2915-BS1)

Prepared: 04/29/2025 Analyzed: 04/29/2025

Diesel (C10-C28)	841	50.0	mg/kg	1000		84.1	70-130			
Residual Range Organics (C28-C40)	996	200	"	1000		99.6	70-130			
Surrogate: o-Terphenyl	46		"	49.8		92.2	50-150			

Matrix Spike (B5D2915-MS1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 04/29/2025

Diesel (C10-C28)	774	50.0	mg/kg	1000	ND	77.4	70-130			
Residual Range Organics (C28-C40)	911	200	"	1000	ND	91.1	70-130			
Surrogate: o-Terphenyl	56		"	49.8		113	50-150			

Matrix Spike Dup (B5D2915-MSD1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 04/29/2025

Diesel (C10-C28)	829	50.0	mg/kg	1000	ND	82.9	70-130	6.92	35	
Residual Range Organics (C28-C40)	963	200	"	1000	ND	96.3	70-130	5.51	35	
Surrogate: o-Terphenyl	54		"	49.8		108	50-150			

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Jen Pellegrini For Jordan A. Bynon, Project Manager



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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 B5D2908 - EPA 3050B

Blank (B5D2908-BLK1)

Prepared: 04/29/2025 Analyzed: 04/30/2025

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 (B5D2908-BS1)

Prepared: 04/29/2025 Analyzed: 04/30/2025

Arsenic	5.39	0.290	mg/kg	5.00		108	80-120			
Barium	498	82.0	"	500		99.7	80-120			
Cadmium	5.34	0.380	"	5.00		107	80-120			
Copper	53.8	46.0	"	50.0		108	80-120			
Lead	4.98	14.0	"	5.00		99.6	80-120			U
Nickel	5.28	26.0	"	5.00		106	80-120			U
Selenium	5.02	0.260	"	5.00		100	80-120			
Silver	5.19	0.800	"	5.00		104	80-120			
Zinc	52.8	370	"	50.0		106	80-120			U

Matrix Spike (B5D2908-MS1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 04/30/2025

Arsenic	9.40	0.271	mg/kg	4.68	4.25	110	75-125			
Barium	581	76.7	"	468	121	98.3	75-125			
Cadmium	5.45	0.355	"	4.68	0.303	110	75-125			
Copper	63.2	43.0	"	46.8	12.6	108	75-125			
Lead	15.5	13.1	"	4.68	11.1	93.7	75-125			

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Kyle Lawrence
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 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 B5D2908 - EPA 3050B

Matrix Spike (B5D2908-MS1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 04/30/2025

Nickel	15.3	24.3	mg/kg	4.68	10.6	100	75-125			U
Selenium	5.96	0.243	"	4.68	0.854	109	75-125			
Silver	5.07	0.748	"	4.68	0.0521	107	75-125			
Zinc	111	346	"	46.8	63.1	102	75-125			U

Matrix Spike Dup (B5D2908-MSD1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 04/30/2025

Arsenic	9.55	0.283	mg/kg	4.88	4.25	109	75-125	1.61	20	
Barium	627	80.0	"	488	121	104	75-125	7.64	20	
Cadmium	5.65	0.371	"	4.88	0.303	110	75-125	3.62	20	
Copper	65.7	44.9	"	48.8	12.6	109	75-125	4.01	20	
Lead	16.0	13.7	"	4.88	11.1	100	75-125	3.22	20	
Nickel	15.8	25.4	"	4.88	10.6	108	75-125	3.71	20	U
Selenium	6.10	0.254	"	4.88	0.854	107	75-125	2.28	20	
Silver	5.37	0.781	"	4.88	0.0521	109	75-125	5.62	20	
Zinc	116	361	"	48.8	63.1	108	75-125	4.31	20	U

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Jen Pellegrini For Jordan A. Bynon, Project Manager



CTEH
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Kyle Lawrence
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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 B5D2911 - Saturated Paste pH/EC

Blank (B5D2911-BLK1)

Prepared: 04/29/2025 Analyzed: 05/01/2025

Specific Conductance (EC)	ND	0.00500	mmhos/cm							U
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Duplicate (B5D2911-DUP1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 05/01/2025

Specific Conductance (EC)	4.48	0.00500	mmhos/cm		3.98			11.8	25	
pH	8.41		pH Units		8.56			1.77	25	

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Jen Pellegrini For Jordan A. Bynon, Project Manager



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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 B5D2912 - EPA 5030 (soil)

Blank (B5D2912-BLK1)

Prepared: 04/29/2025 Analyzed: 04/29/2025

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	0.11		"	0.125		87.5	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.6	70-130			

LCS (B5D2912-BS1)

Prepared: 04/29/2025 Analyzed: 04/29/2025

1,2,4-Trimethylbenzene	0.111	0.00200	mg/kg	0.100		111	70-130			
1,3,5-Trimethylbenzene	0.109	0.00200	"	0.100		109	70-130			
Benzene	0.0984	0.00200	"	0.100		98.4	70-130			
Ethylbenzene	0.103	0.00200	"	0.100		103	70-130			
Naphthalene	0.0897	0.00380	"	0.100		89.7	70-130			
Toluene	0.0961	0.00200	"	0.100		96.1	70-130			
o-Xylene	0.105	0.00200	"	0.100		105	70-130			
m,p-Xylene	0.207	0.00400	"	0.200		104	70-130			

Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		92.7	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		93.2	70-130			

Matrix Spike (B5D2912-MS1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 04/29/2025

1,2,4-Trimethylbenzene	0.0693	0.00200	mg/kg	0.100	ND	69.3	70-130			QR-02
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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 B5D2912 - EPA 5030 (soil)

Matrix Spike (B5D2912-MS1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 04/29/2025

1,3,5-Trimethylbenzene	0.0721	0.00200	mg/kg	0.100	ND	72.1	70-130			
Benzene	0.0740	0.00200	"	0.100	ND	74.0	70-130			
Ethylbenzene	0.0812	0.00200	"	0.100	ND	81.2	70-130			
Naphthalene	0.0247	0.00380	"	0.100	ND	24.7	70-130			QR-02
Toluene	0.0693	0.00200	"	0.100	ND	69.3	70-130			QR-02
o-Xylene	0.0800	0.00200	"	0.100	ND	80.0	70-130			
m,p-Xylene	0.161	0.00400	"	0.200	ND	80.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		106	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		107	70-130			

Matrix Spike Dup (B5D2912-MSD1)

Source: E5D0816-02

Prepared: 04/29/2025 Analyzed: 04/30/2025

1,2,4-Trimethylbenzene	0.122	0.00200	mg/kg	0.100	ND	122	70-130	54.9	20	QR-02
1,3,5-Trimethylbenzene	0.122	0.00200	"	0.100	ND	122	70-130	51.3	20	QR-02
Benzene	0.0991	0.00200	"	0.100	ND	99.1	70-130	29.0	20	QR-02
Ethylbenzene	0.132	0.00200	"	0.100	ND	132	70-130	47.4	20	QM-07
Naphthalene	0.0653	0.00380	"	0.100	ND	65.3	70-130	90.3	20	QM-07
Toluene	0.101	0.00200	"	0.100	ND	101	70-130	37.6	20	QR-02
o-Xylene	0.135	0.00200	"	0.100	ND	135	70-130	51.1	20	QM-07
m,p-Xylene	0.266	0.00400	"	0.200	ND	133	70-130	49.6	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		93.4	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.14		"	0.125		109	70-130			

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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

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-14 The pre-digestion matrix spike recoveries for Cr6 were less than the acceptance range min. The soil sample reduced Cr6 and no measurable native Cr6 existed in the unspiked sample. Batch QC deemed acceptable based on passing LCS recovery.
 - 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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