



**CTEH**

**May 30, 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 22, 2025. This project is associated with Origins project number E5E0769-01.

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
GACO0521T144S001	E5E0769-01	Soil	May 21, 2025 9:30	05/22/2025 07:45

Origins Laboratory

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

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: E5E0769 Client: CTEH  
Client Project ID: PROJ-054017

Checklist Completed by: NKM/3mc Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)  
Date/time completed: 05/22/25 Airbill #: N/A

Matrix(s) Received: (Check all that apply):  Soil/Solid  <sup>WATER</sup> Water  Other: \_\_\_\_\_  
(Describe)

Cooler Number/Temperature: 1 / 0.9 °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 <sup>(1)</sup> ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	/			
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact <sup>(1)</sup> ?	/			
Was adequate sample volume provided <sup>(1)</sup> ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	/			
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	/			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	/			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	/			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? <b>If yes, contact client and note in narrative.</b>			/	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (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 HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH > 10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			/	
Additional Comments (if any):				

<sup>(1)</sup>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)

05/22/25  
Date/Time Reviewed

Origins Laboratory



Jen Pellegrini For Jordan A. Bynon, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



CTEH  
 5120 North Shore Drive  
 North Little Rock AR 72118

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

**GACO0521T144S001**  
**5/21/2025 9:30:00AM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
<b>E5E0769-01 (Soil)</b>									
<b>Origins Laboratory</b>									
<b>Boron (DTPA Sorbitol)</b>									
Boron	1.87		0.100	mg/L	1	B5E2207	05/22/2025	05/27/2025	
<b>DRO/ORO by EPA 8015D</b>									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5E2232	05/22/2025	05/22/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	85.5 %			50-150		"	"	"	
<b>GBTEX+TMBs by 8260D</b>									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5E2236	05/22/2025	05/22/2025	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	106 %			70-130		"	"	"	
Surrogate: Toluene-d8	98.2 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	94.7 %			70-130		"	"	"	

Origins Laboratory

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

**GACO0521T144S001**  
**5/21/2025 9:30:00AM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-----------------	-------	----------	-------	----------	----------	-------

**E5E0769-01 (Soil)**  
**Origins Laboratory**

**Metals by Saturated Paste by EPA 6010**

Calcium	3.38		0.499	meq/L	10	[CALC]	05/22/2025	05/23/2025	
Magnesium	1.61		0.823	"	"	"	"	"	
Sodium	2.90		0.435	"	"	"	"	"	

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B5E2243	05/22/2025	05/22/2025	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
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
Pyrene	ND		0.020	"	"	"	"	"	U

Origins Laboratory

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

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

**GACO0521T144S001**  
**5/21/2025 9:30:00AM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-----------------	-------	----------	-------	----------	----------	-------

**E5E0769-01 (Soil)**  
**Origins Laboratory**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	100 %			60-130		B5E2243	05/22/2025	05/22/2025	
Surrogate: Anthracene-d10	101 %			60-130		"	"	"	
Surrogate: Pyrene-d10	101 %			60-130		"	"	"	
Surrogate: Benzo (a) pyrene-d12	97.7 %			60-130		"	"	"	

**pH in Soil by 9045D**

pH	7.92			pH Units	1	B5E2224	05/22/2025	05/23/2025	
----	------	--	--	----------	---	---------	------------	------------	--

**SAR by 20B Saturated Paste**

SAR	1.84		0.0100	SAR	1	B5E2213	05/22/2025	05/23/2025	
-----	------	--	--------	-----	---	---------	------------	------------	--

**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	1.61		0.00500	mmhos/cm	1	B5E2224	05/22/2025	05/23/2025	
---------------------------	------	--	---------	----------	---	---------	------------	------------	--

**Table 915 metals by EPA 6020B**

Arsenic	3.57		0.255	mg/kg	10	B5E2221	05/22/2025	05/23/2025	
Barium	95.8		72.1	"	"	"	"	"	
Cadmium	ND		0.334	"	"	"	"	"	U
Copper	ND		40.4	"	"	"	"	"	U
Lead	41.6		12.3	"	"	"	"	"	
Nickel	ND		22.9	"	"	"	"	"	U

Origins Laboratory

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

**GACO0521T144S001**  
**5/21/2025 9:30:00AM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-----------------	-------	----------	-------	----------	----------	-------

**E5E0769-01 (Soil)**  
**Origins Laboratory**

**Table 915 metals by EPA 6020B**

Selenium	0.321		0.229	mg/kg	10	B5E2221	05/22/2025	05/23/2025	
Silver	ND		0.703	"	"	"	"	"	U
Zinc	ND		325	"	"	"	"	"	U

Origins Laboratory

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



CTEH  
 5120 North Shore Drive  
 North Little Rock AR 72118

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

**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory**

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

**Batch B5E2207 - DTPA Sorbitol Preparation**

**Blank (B5E2207-BLK1)**

Prepared: 05/22/2025 Analyzed: 05/27/2025

Boron	ND	0.100	mg/L							U
-------	----	-------	------	--	--	--	--	--	--	---

**Duplicate (B5E2207-DUP1)**

**Source: E5E0750-01**

Prepared: 05/22/2025 Analyzed: 05/27/2025

Boron	0.557	0.0999	mg/L		0.659			16.9	50	
-------	-------	--------	------	--	-------	--	--	------	----	--

**Batch B5E2213 - Saturated Paste Metals**

**Blank (B5E2213-BLK1)**

Prepared: 05/22/2025 Analyzed: 05/23/2025

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 (B5E2213-DUP1)**

**Source: E5E0775-12**

Prepared: 05/22/2025 Analyzed: 05/23/2025

Calcium PPM	47.8	10.0	mg/L		46.4			3.02	50	
SAR	ND	0.0100	SAR		0.0405				200	U
Magnesium PPM	5.29	10.0	mg/L		5.18			2.10	50	U
Sodium PPM	1.10	10.0	"		1.09			0.913	50	U

Origins Laboratory

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B5E2243 - EPA 3580**

**Blank (B5E2243-BLK1)**

Prepared: 05/22/2025 Analyzed: 05/22/2025

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		100	60-130			
Surrogate: Anthracene-d10	200		"	200		98.9	60-130			
Surrogate: Pyrene-d10	210		"	200		104	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		95.4	60-130			

**LCS (B5E2243-BS1)**

Prepared: 05/22/2025 Analyzed: 05/22/2025

1-Methylnaphthalene	0.195	0.002	mg/kg	0.200		97.6	70-130			
2-Methylnaphthalene	0.195	0.002	"	0.200		97.7	70-130			
Acenaphthene	0.199	0.020	"	0.200		99.5	70-130			
Anthracene	0.190	0.020	"	0.200		95.1	70-130			

Origins Laboratory

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B5E2243 - EPA 3580**

**LCS (B5E2243-BS1)**

Prepared: 05/22/2025 Analyzed: 05/22/2025

Benzo (a) anthracene	0.199	0.005	mg/kg	0.200		99.4	70-130			
Benzo (a) pyrene	0.187	0.020	"	0.200		93.3	70-130			
Benzo (b) fluoranthene	0.181	0.020	"	0.200		90.7	70-130			
Benzo (g,h,i) perylene	0.170	0.020	"	0.200		84.8	70-130			
Benzo (k) fluoranthene	0.180	0.020	"	0.200		90.2	70-130			
Chrysene	0.185	0.020	"	0.200		92.5	70-130			
Dibenz (a,h) anthracene	0.213	0.020	"	0.200		107	70-130			
Fluoranthene	0.193	0.020	"	0.200		96.7	70-130			
Fluorene	0.199	0.020	"	0.200		99.3	70-130			
Indeno (1,2,3-cd) pyrene	0.198	0.020	"	0.200		98.8	70-130			
Naphthalene	0.195	0.002	"	0.200		97.5	70-130			
Phenanthrene	0.195	0.020	"	0.200		97.6	70-130			
Pyrene	0.201	0.020	"	0.200		101	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	200		"	200		98.8	60-130			
Surrogate: Pyrene-d10	210		"	200		104	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		97.4	60-130			

**Matrix Spike (B5E2243-MS1)**

**Source: E5E0772-12**

Prepared: 05/22/2025 Analyzed: 05/22/2025

1-Methylnaphthalene	0.204	0.002	mg/kg	0.200	ND	102	70-130			
2-Methylnaphthalene	0.205	0.002	"	0.200	ND	102	70-130			
Acenaphthene	0.206	0.020	"	0.200	0.0005	103	70-130			
Anthracene	0.195	0.020	"	0.200	0.0005	97.5	70-130			
Benzo (a) anthracene	0.199	0.005	"	0.200	ND	99.7	70-130			
Benzo (a) pyrene	0.191	0.020	"	0.200	0.0007	95.0	70-130			
Benzo (b) fluoranthene	0.188	0.020	"	0.200	0.0007	93.7	70-130			
Benzo (g,h,i) perylene	0.171	0.020	"	0.200	0.0008	85.1	70-130			

Origins Laboratory

Jen Pellegrini For Jordan A. Bynon, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B5E2243 - EPA 3580**

**Matrix Spike (B5E2243-MS1)**

**Source: E5E0772-12**

Prepared: 05/22/2025 Analyzed: 05/22/2025

Benzo (k) fluoranthene	0.179	0.020	mg/kg	0.200	ND	89.3	70-130			
Chrysene	0.186	0.020	"	0.200	0.001	92.3	70-130			
Dibenz (a,h) anthracene	0.216	0.020	"	0.200	ND	108	70-130			
Fluoranthene	0.202	0.020	"	0.200	0.0005	101	70-130			
Fluorene	0.205	0.020	"	0.200	0.001	102	70-130			
Indeno (1,2,3-cd) pyrene	0.199	0.020	"	0.200	ND	99.3	70-130			
Naphthalene	0.203	0.002	"	0.200	ND	102	70-130			
Phenanthrene	0.202	0.020	"	0.200	ND	101	70-130			
Pyrene	0.203	0.020	"	0.200	ND	102	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	200		"	200		98.9	60-130			
Surrogate: Pyrene-d10	200		"	200		100	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		96.1	60-130			

**Matrix Spike Dup (B5E2243-MSD1)**

**Source: E5E0772-12**

Prepared: 05/22/2025 Analyzed: 05/22/2025

1-Methylnaphthalene	0.206	0.002	mg/kg	0.200	ND	103	70-130	0.870	20	
2-Methylnaphthalene	0.206	0.002	"	0.200	ND	103	70-130	0.577	20	
Acenaphthene	0.209	0.020	"	0.200	0.0005	104	70-130	1.61	20	
Anthracene	0.201	0.020	"	0.200	0.0005	100	70-130	2.93	20	
Benzo (a) anthracene	0.205	0.005	"	0.200	ND	103	70-130	2.87	20	
Benzo (a) pyrene	0.195	0.020	"	0.200	0.0007	97.0	70-130	2.13	20	
Benzo (b) fluoranthene	0.191	0.020	"	0.200	0.0007	95.1	70-130	1.48	20	
Benzo (g,h,i) perylene	0.176	0.020	"	0.200	0.0008	87.5	70-130	2.73	20	
Benzo (k) fluoranthene	0.184	0.020	"	0.200	ND	91.9	70-130	2.87	20	
Chrysene	0.190	0.020	"	0.200	0.001	94.5	70-130	2.30	20	
Dibenz (a,h) anthracene	0.215	0.020	"	0.200	ND	108	70-130	0.197	20	
Fluoranthene	0.203	0.020	"	0.200	0.0005	101	70-130	0.505	20	

Origins Laboratory

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B5E2243 - EPA 3580

Matrix Spike Dup (B5E2243-MSD1)

Source: E5E0772-12

Prepared: 05/22/2025 Analyzed: 05/22/2025

Fluorene	0.206	0.020	mg/kg	0.200	0.001	102	70-130	0.489	20	
Indeno (1,2,3-cd) pyrene	0.204	0.020	"	0.200	ND	102	70-130	2.86	20	
Naphthalene	0.205	0.002	"	0.200	ND	103	70-130	0.833	20	
Phenanthrene	0.205	0.020	"	0.200	ND	103	70-130	1.51	20	
Pyrene	0.207	0.020	"	0.200	ND	103	70-130	1.63	20	
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	200		"	200		99.6	60-130			
Surrogate: Pyrene-d10	200		"	200		101	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		96.5	60-130			

Origins Laboratory

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

**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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B5E2232 - EPA 3550B**

**Blank (B5E2232-BLK1)**

Prepared: 05/22/2025 Analyzed: 05/22/2025

Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	23		"	24.9		90.7	50-150			

**LCS (B5E2232-BS1)**

Prepared: 05/22/2025 Analyzed: 05/22/2025

Diesel (C10-C28)	757	50.0	mg/kg	1000		75.7	70-130			
Residual Range Organics (C28-C40)	776	200	"	1000		77.6	70-130			
Surrogate: o-Terphenyl	56		"	49.8		112	50-150			

**Matrix Spike (B5E2232-MS1)**

**Source: E5E0767-01**

Prepared: 05/22/2025 Analyzed: 05/22/2025

Diesel (C10-C28)	721	50.0	mg/kg	1000	ND	72.1	70-130			
Residual Range Organics (C28-C40)	740	200	"	1000	ND	74.0	70-130			
Surrogate: o-Terphenyl	51		"	49.8		102	50-150			

**Matrix Spike Dup (B5E2232-MSD1)**

**Source: E5E0767-01**

Prepared: 05/22/2025 Analyzed: 05/22/2025

Diesel (C10-C28)	705	50.0	mg/kg	1000	ND	70.5	70-130	2.25	35	
Residual Range Organics (C28-C40)	719	200	"	1000	ND	71.9	70-130	2.87	35	
Surrogate: o-Terphenyl	49		"	49.8		99.5	50-150			

Origins Laboratory

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

**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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B5E2221 - EPA 3050B**

**Blank (B5E2221-BLK1)**

Prepared: 05/22/2025 Analyzed: 05/23/2025

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 (B5E2221-BS1)**

Prepared: 05/22/2025 Analyzed: 05/23/2025

Arsenic	5.30	0.290	mg/kg	5.00		106	80-120			
Barium	555	82.0	"	500		111	80-120			
Cadmium	5.48	0.380	"	5.00		110	80-120			
Copper	55.2	46.0	"	50.0		110	80-120			
Lead	5.13	14.0	"	5.00		103	80-120			U
Nickel	5.85	26.0	"	5.00		117	80-120			U
Selenium	5.10	0.260	"	5.00		102	80-120			
Silver	5.72	0.800	"	5.00		114	80-120			
Zinc	52.0	370	"	50.0		104	80-120			U

**Matrix Spike (B5E2221-MS1)**

Source: E5E0778-09

Prepared: 05/22/2025 Analyzed: 05/23/2025

Arsenic	9.73	0.256	mg/kg	4.42	3.57	140	75-125			QM-07
Barium	532	72.4	"	442	78.6	103	75-125			
Cadmium	4.99	0.336	"	4.42	0.271	107	75-125			
Copper	59.2	40.6	"	44.2	10.8	110	75-125			
Lead	42.7	12.4	"	4.42	30.6	275	75-125			QM-07

Origins Laboratory

Jen Pellegrini For Jordan A. Bynon, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B5E2221 - EPA 3050B**

**Matrix Spike (B5E2221-MS1)**

**Source: E5E0778-09**

Prepared: 05/22/2025 Analyzed: 05/23/2025

Nickel	11.6	23.0	mg/kg	4.42	7.40	95.0	75-125			U
Selenium	4.80	0.230	"	4.42	0.295	102	75-125			
Silver	4.89	0.707	"	4.42	0.0363	110	75-125			
Zinc	135	327	"	44.2	90.9	98.9	75-125			U

**Matrix Spike Dup (B5E2221-MSD1)**

**Source: E5E0778-09**

Prepared: 05/22/2025 Analyzed: 05/23/2025

Arsenic	8.06	0.260	mg/kg	4.48	3.57	100	75-125	18.7	20	
Barium	547	73.5	"	448	78.6	105	75-125	2.73	20	
Cadmium	5.10	0.340	"	4.48	0.271	108	75-125	2.13	20	
Copper	59.0	41.2	"	44.8	10.8	108	75-125	0.327	20	
Lead	48.3	12.5	"	4.48	30.6	395	75-125	12.2	20	QM-07
Nickel	11.2	23.3	"	4.48	7.40	84.4	75-125	3.66	20	U
Selenium	4.86	0.233	"	4.48	0.295	102	75-125	1.33	20	
Silver	5.08	0.717	"	4.48	0.0363	113	75-125	3.81	20	
Zinc	134	331	"	44.8	90.9	96.2	75-125	0.420	20	U

Origins Laboratory

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

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

**Saturated Paste - Quality Control**  
**Origins Laboratory**

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

**Batch B5E2224 - Saturated Paste pH/EC**

**Blank (B5E2224-BLK1)**

Prepared: 05/22/2025 Analyzed: 05/23/2025

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

**Duplicate (B5E2224-DUP1)**

**Source: E5E0775-12**

Prepared: 05/22/2025 Analyzed: 05/23/2025

Specific Conductance (EC)	0.308	0.00500	mmhos/cm		0.318			3.39	25	
pH	7.57		pH Units		7.86			3.76	25	

Origins Laboratory

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

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

**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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B5E2236 - EPA 5030 (soil)**

**Blank (B5E2236-BLK1)**

Prepared: 05/22/2025 Analyzed: 05/22/2025

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		98.0	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.8	70-130			

**LCS (B5E2236-BS1)**

Prepared: 05/22/2025 Analyzed: 05/22/2025

1,2,4-Trimethylbenzene	0.0881	0.00200	mg/kg	0.100		88.1	70-130			
1,3,5-Trimethylbenzene	0.0897	0.00200	"	0.100		89.7	70-130			
Benzene	0.0820	0.00200	"	0.100		82.0	70-130			
Ethylbenzene	0.0885	0.00200	"	0.100		88.5	70-130			
Naphthalene	0.0831	0.00380	"	0.100		83.1	70-130			
Toluene	0.0832	0.00200	"	0.100		83.2	70-130			
o-Xylene	0.0866	0.00200	"	0.100		86.6	70-130			
m,p-Xylene	0.175	0.00400	"	0.200		87.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		94.6	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 (B5E2236-MS1)**

Source: E5E0767-01

Prepared: 05/22/2025 Analyzed: 05/22/2025

1,2,4-Trimethylbenzene	0.0758	0.00200	mg/kg	0.100	ND	75.8	70-130			
------------------------	--------	---------	-------	-------	----	------	--------	--	--	--

Origins Laboratory

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

**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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B5E2236 - EPA 5030 (soil)**

**Matrix Spike (B5E2236-MS1)**

Source: E5E0767-01

Prepared: 05/22/2025 Analyzed: 05/22/2025

1,3,5-Trimethylbenzene	0.0755	0.00200	mg/kg	0.100	ND	75.5	70-130			
Benzene	0.0761	0.00200	"	0.100	ND	76.1	70-130			
Ethylbenzene	0.0751	0.00200	"	0.100	ND	75.1	70-130			
Naphthalene	0.0747	0.00380	"	0.100	ND	74.7	70-130			
Toluene	0.0741	0.00200	"	0.100	ND	74.1	70-130			
o-Xylene	0.0758	0.00200	"	0.100	ND	75.8	70-130			
m,p-Xylene	0.151	0.00400	"	0.200	ND	75.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

**Matrix Spike Dup (B5E2236-MSD1)**

Source: E5E0767-01

Prepared: 05/22/2025 Analyzed: 05/22/2025

1,2,4-Trimethylbenzene	0.0670	0.00200	mg/kg	0.100	ND	67.0	70-130	12.4	20	QR-02
1,3,5-Trimethylbenzene	0.0673	0.00200	"	0.100	ND	67.3	70-130	11.5	20	QR-02
Benzene	0.0713	0.00200	"	0.100	ND	71.3	70-130	6.51	20	
Ethylbenzene	0.0696	0.00200	"	0.100	ND	69.6	70-130	7.63	20	QR-02
Naphthalene	0.0650	0.00380	"	0.100	ND	65.0	70-130	13.9	20	QR-02
Toluene	0.0694	0.00200	"	0.100	ND	69.4	70-130	6.55	20	QR-02
o-Xylene	0.0700	0.00200	"	0.100	ND	70.0	70-130	7.93	20	
m,p-Xylene	0.139	0.00400	"	0.200	ND	69.6	70-130	8.24	20	QR-02
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	70-130			

Origins Laboratory

Jen Pellegrini For Jordan A. Bynon, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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-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.

Origins Laboratory



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Jen Pellegrini For Jordan A. Bynon, Project Manager