ORIGINS LABORATORY

CTEH

Kyle Lawrence

5120 North Shore Drive

North Little RockAR 72118

June 03, 2025

Project Name - PROJ-054017 **Project Number - PROJ-054017**

Attached are your analytical results for PROJ-054017 received by Origins Laboratory May 05, 2025. This project is associated with Origins project number E5E0204-01.

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

THE NELAC INSTITUTE

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
GACO0505T007S001	E5E0204-01	Soil	May 5, 2025 9:50	05/05/2025 20:00

Origins Laboratory

Jen Pellegrini For Jordan A. Bynon, Project Manager

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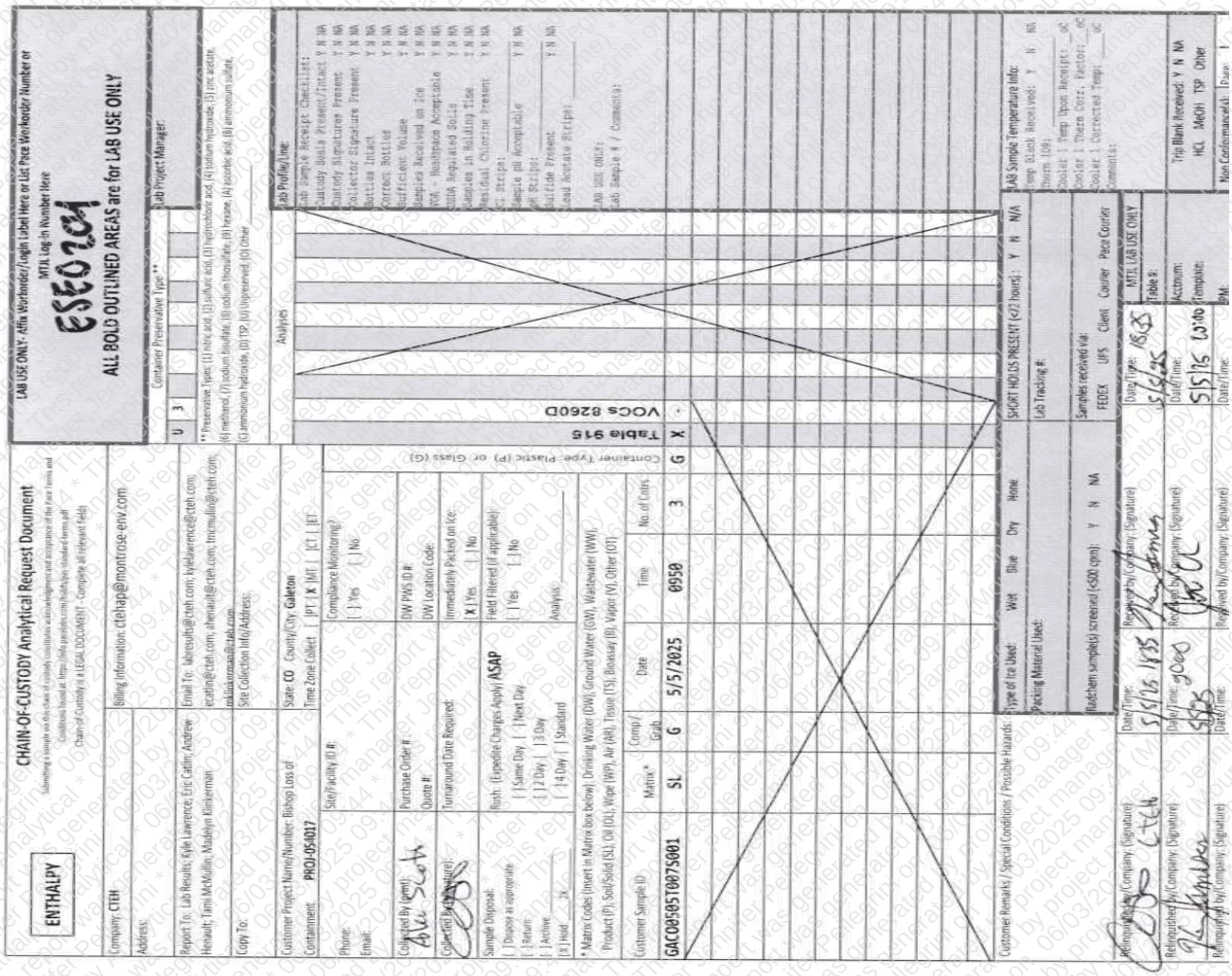

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Kyle Lawrence
Project Number: PROJ-054017
Project: PROJ-054017

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: ESE0204

Client: CTEH

Client Project ID: PROJ-054017

Checklist Completed by: SPM / SKM

Shipped Via: TID
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 05 / 06 / 25

Airbill #: N/A

Matrix(s) Received: (Check all that apply): X Soil/Solid ____ Water ____ Other: ____
(Describe)

Cooler Number/Temperature: 1 / 1.6 °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]?	Y			
Is there ice present (document if blue ice is used)	Y			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		N		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		N		
Were all samples received intact[1]?	Y			
Was adequate sample volume provided[1]?	Y			
Are short holding time analytes or samples with HTs due within 48 hours present[1]?			N	
Is a chain-of-custody (COC) present and filled out completely[1]?	Y			
Does the COC agree with the number and type of sample bottles received[1]?	Y			
Do the sample IDs on the bottle labels match the COC[1]?	Y			
Is the COC properly relinquished by the client with date and time recorded[1]?	Y			
For volatiles in water – is there headspace (> ¼ inch bubble) present? **If yes, contact client and note in narrative.**			N	
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)*			N	
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.*

JB
Reviewed by (Project Manager)

5/6/25
Date/Time Reviewed

Origins Laboratory

Jen Pellegrini

Jen Pellegrini For Jordan A. Bynon, Project Manager

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

GACO0505T007S001
5/5/2025 9:50:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5E0204-01 (Soil)									
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	7.72		0.0993	mg/L	1	B5E0617	05/06/2025	05/07/2025	
Chromium Hexavalent by EPA 7199									
Hexavalent Chromium	ND		0.251	mg/kg	1	B5E0626	05/06/2025	05/29/2025	U
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5E0638	05/06/2025	05/07/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	*63.8 %*			*50-150*		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5E0628	05/06/2025	05/07/2025	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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Project Number: PROJ-054017
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GACO0505T007S001
5/5/2025 9:50:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5E0204-01 (Soil)									
Origins Laboratory									
GBTEX+TMBs by 8260D									
Surrogate: 1,2-Dichloroethane-d4	*122 %*			*70-130*		*B5E0628*	*05/06/2025*	*05/07/2025*	
Surrogate: Toluene-d8	*108 %*			*70-130*		*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene	*108 %*			*70-130*		*"*	*"*	*"*	
Metals by Saturated Paste by EPA 6010									
Calcium	19.9		0.499	meq/L	10	[CALC]	05/06/2025	05/08/2025	
Magnesium	10.8		0.823	"	"	"	"	"	
Sodium	1.55		0.435	"	"	"	"	"	
PAH by EPA 8270E extracted via 3580A									
1-Methylnaphthalene	ND		0.002	mg/kg	1	B5E0633	05/06/2025	05/07/2025	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	0.005		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

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Project: PROJ-054017

GACO0505T007S001
5/5/2025 9:50:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5E0204-01 (Soil)									
Origins Laboratory									
PAH by EPA 8270E extracted via 3580A									
Fluoranthene	ND		0.020	mg/kg	1	B5E0633	05/06/2025	05/07/2025	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	*102 %*			*60-130*		"	"	"	
Surrogate: Anthracene-d10	*95.6 %*			*60-130*		"	"	"	
Surrogate: Pyrene-d10	*95.1 %*			*60-130*		"	"	"	
Surrogate: Benzo (a) pyrene-d12	*105 %*			*60-130*		"	"	"	
pH in Soil by 9045D									
pH	7.94			pH Units	1	B5E0621	05/06/2025	05/07/2025	
SAR by 20B Saturated Paste									
SAR	0.396		0.0100	SAR	1	B5E0613	05/06/2025	05/08/2025	
Specific Conductance Mod. 9050A									
Specific Conductance (EC)	5.13		0.00500	mmhos/cm	1	B5E0621	05/06/2025	05/07/2025	
Table 915 metals by EPA 6020B									

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

GACO0505T007S001
5/5/2025 9:50:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5E0204-01 (Soil)									
Origins Laboratory									
Table 915 metals by EPA 6020B									
Arsenic	6.25		0.254	mg/kg	10	B5E0605	05/06/2025	05/06/2025	
Barium	91.5		71.8	"	"	"	"	"	
Cadmium	0.354		0.333	"	"	"	"	"	
Copper	ND		40.3	"	"	"	"	"	U
Lead	ND		12.3	"	"	"	"	"	U
Nickel	ND		22.8	"	"	"	"	"	U
Selenium	0.524		0.228	"	"	"	"	"	
Silver	ND		0.701	"	"	"	"	"	U
Zinc	ND		324	"	"	"	"	"	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 B5E0626 - EPA 3060A										
Blank (B5E0626-BLK1)					Prepared: 05/06/2025 Analyzed: 05/29/2025					
Hexavalent Chromium	ND	0.250	mg/kg							U
LCS (B5E0626-BS1)					Prepared: 05/06/2025 Analyzed: 05/29/2025					
Hexavalent Chromium	2.35	0.250	mg/kg	2.50		93.9	80-120			
Matrix Spike (B5E0626-MS1)		**Source: E5E0201-24**			Prepared: 05/06/2025 Analyzed: 05/30/2025					
Hexavalent Chromium	1.89	0.246	mg/kg	2.46	ND	76.7	75-125			
Matrix Spike (B5E0626-MS2)		**Source: E5E0201-24**			Prepared: 05/06/2025 Analyzed: 05/29/2025					
Hexavalent Chromium	254	25.0	mg/kg	256	ND	99.2	75-125			
Matrix Spike Dup (B5E0626-MSD1)		**Source: E5E0201-24**			Prepared: 05/06/2025 Analyzed: 05/30/2025					**QM-07**
Hexavalent Chromium	1.73	0.256	mg/kg	2.56	ND	67.7	75-125	8.39	200	
Post Spike (B5E0626-PS1)		**Source: E5E0201-24**			Prepared: 05/06/2025 Analyzed: 05/30/2025					
Hexavalent Chromium	49.6		ug/L	50.0	0.00	99.2	80-120			

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Project Number: PROJ-054017
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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
Batch B5E0613 - Saturated Paste Metals										
Blank (B5E0613-BLK1)				Prepared: 05/06/2025 Analyzed: 05/08/2025						
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 (B5E0613-DUP1)		Source: E5E0202-01		Prepared: 05/06/2025 Analyzed: 05/08/2025						
Calcium PPM	477	10.0	mg/L		500			4.71	50	
SAR	ND	0.0100	SAR		ND				200	U
Magnesium PPM	187	10.0	mg/L		200			6.76	50	
Sodium PPM	312	10.0	"		324			3.66	50	
Batch B5E0617 - DTPA Sorbitol Preparation										
Blank (B5E0617-BLK1)				Prepared: 05/06/2025 Analyzed: 05/07/2025						
Boron	ND	0.100	mg/L							U
Duplicate (B5E0617-DUP1)		Source: E5E0202-01		Prepared: 05/06/2025 Analyzed: 05/07/2025						
Boron	4.23	0.100	mg/L		4.13			2.53	50	

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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 B5E0633 - EPA 3580										
Blank (B5E0633-BLK1)				Prepared: 05/06/2025 Analyzed: 05/06/2025						
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*		*99.7*	*60-130*			
Surrogate: Anthracene-d10	*190*		*"*	*200*		*94.1*	*60-130*			
Surrogate: Pyrene-d10	*200*		*"*	*200*		*97.9*	*60-130*			
Surrogate: Benzo (a) pyrene-d12	*200*		*"*	*200*		*102*	*60-130*			
LCS (B5E0633-BS1)				Prepared: 05/06/2025 Analyzed: 05/06/2025						
1-Methylnaphthalene	0.177	0.002	mg/kg	0.200		88.5	70-130			
2-Methylnaphthalene	0.180	0.002	"	0.200		89.8	70-130			
Acenaphthene	0.186	0.020	"	0.200		93.0	70-130			
Anthracene	0.180	0.020	"	0.200		90.1	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
Batch B5E0633 - EPA 3580										
LCS (B5E0633-BS1)						Prepared: 05/06/2025 Analyzed: 05/06/2025				
Benzo (a) anthracene	0.194	0.005	mg/kg	0.200		97.1	70-130			
Benzo (a) pyrene	0.198	0.020	"	0.200		98.9	70-130			
Benzo (b) fluoranthene	0.192	0.020	"	0.200		96.0	70-130			
Benzo (g,h,i) perylene	0.196	0.020	"	0.200		98.1	70-130			
Benzo (k) fluoranthene	0.194	0.020	"	0.200		96.8	70-130			
Chrysene	0.196	0.020	"	0.200		98.1	70-130			
Dibenz (a,h) anthracene	0.230	0.020	"	0.200		115	70-130			
Fluoranthene	0.200	0.020	"	0.200		100	70-130			
Fluorene	0.188	0.020	"	0.200		94.2	70-130			
Indeno (1,2,3-cd) pyrene	0.194	0.020	"	0.200		97.2	70-130			
Naphthalene	0.190	0.002	"	0.200		95.2	70-130			
Phenanthrene	0.195	0.020	"	0.200		97.5	70-130			
Pyrene	0.198	0.020	"	0.200		98.8	70-130			
Surrogate: Fluorene-d10	*200*		*ug/kg*	*200*		*101*	*60-130*			
Surrogate: Anthracene-d10	*190*		*"*	*200*		*93.9*	*60-130*			
Surrogate: Pyrene-d10	*190*		*"*	*200*		*97.5*	*60-130*			
Surrogate: Benzo (a) pyrene-d12	*210*		*"*	*200*		*103*	*60-130*			
Matrix Spike (B5E0633-MS1)		**Source: E5E0202-01**				Prepared: 05/06/2025 Analyzed: 05/06/2025				
1-Methylnaphthalene	0.188	0.002	mg/kg	0.200	ND	93.9	70-130			
2-Methylnaphthalene	0.187	0.002	"	0.200	ND	93.3	70-130			
Acenaphthene	0.197	0.020	"	0.200	ND	98.7	70-130			
Anthracene	0.190	0.020	"	0.200	0.001	94.2	70-130			
Benzo (a) anthracene	0.206	0.005	"	0.200	ND	103	70-130			
Benzo (a) pyrene	0.217	0.020	"	0.200	0.0009	108	70-130			
Benzo (b) fluoranthene	0.201	0.020	"	0.200	0.0007	100	70-130			
Benzo (g,h,i) perylene	0.206	0.020	"	0.200	0.0007	103	70-130			

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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 B5E0633 - EPA 3580										
Matrix Spike (B5E0633-MS1)		**Source: E5E0202-01**			Prepared: 05/06/2025 Analyzed: 05/06/2025					
Benzo (k) fluoranthene	0.205	0.020	mg/kg	0.200	0.0006	102	70-130			
Chrysene	0.202	0.020	"	0.200	0.001	100	70-130			
Dibenz (a,h) anthracene	0.234	0.020	"	0.200	ND	117	70-130			
Fluoranthene	0.214	0.020	"	0.200	0.0005	107	70-130			
Fluorene	0.197	0.020	"	0.200	0.0003	98.2	70-130			
Indeno (1,2,3-cd) pyrene	0.210	0.020	"	0.200	0.001	104	70-130			
Naphthalene	0.199	0.002	"	0.200	ND	99.3	70-130			
Phenanthrene	0.204	0.020	"	0.200	ND	102	70-130			
Pyrene	0.207	0.020	"	0.200	ND	104	70-130			
Surrogate: Fluorene-d10	*200*		*ug/kg*	*200*		*99.6*	*60-130*			
Surrogate: Anthracene-d10	*180*		*"*	*200*		*89.8*	*60-130*			
Surrogate: Pyrene-d10	*200*		*"*	*200*		*98.1*	*60-130*			
Surrogate: Benzo (a) pyrene-d12	*210*		*"*	*200*		*104*	*60-130*			
Matrix Spike Dup (B5E0633-MSD1)		**Source: E5E0202-01**			Prepared: 05/06/2025 Analyzed: 05/07/2025					
1-Methylnaphthalene	0.189	0.002	mg/kg	0.200	ND	94.3	70-130	0.447	20	
2-Methylnaphthalene	0.192	0.002	"	0.200	ND	95.9	70-130	2.73	20	
Acenaphthene	0.197	0.020	"	0.200	ND	98.7	70-130	0.00512	20	
Anthracene	0.193	0.020	"	0.200	0.001	96.1	70-130	1.95	20	
Benzo (a) anthracene	0.212	0.005	"	0.200	ND	106	70-130	2.60	20	
Benzo (a) pyrene	0.218	0.020	"	0.200	0.0009	109	70-130	0.701	20	
Benzo (b) fluoranthene	0.199	0.020	"	0.200	0.0007	99.4	70-130	0.841	20	
Benzo (g,h,i) perylene	0.204	0.020	"	0.200	0.0007	102	70-130	1.26	20	
Benzo (k) fluoranthene	0.226	0.020	"	0.200	0.0006	113	70-130	9.61	20	
Chrysene	0.203	0.020	"	0.200	0.001	101	70-130	0.476	20	
Dibenz (a,h) anthracene	0.234	0.020	"	0.200	ND	117	70-130	0.0606	20	
Fluoranthene	0.217	0.020	"	0.200	0.0005	108	70-130	1.36	20	

Origins Laboratory

Jen Pellegrini For Jordan A. Bynon, Project Manager

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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 B5E0633 - EPA 3580										
Matrix Spike Dup (B5E0633-MSD1)		**Source: E5E0202-01**			Prepared: 05/06/2025 Analyzed: 05/07/2025					
Fluorene	0.195	0.020	mg/kg	0.200	0.0003	97.5	70-130	0.723	20	
Indeno (1,2,3-cd) pyrene	0.214	0.020	"	0.200	0.001	106	70-130	1.77	20	
Naphthalene	0.200	0.002	"	0.200	ND	99.9	70-130	0.622	20	
Phenanthrene	0.207	0.020	"	0.200	ND	104	70-130	1.50	20	
Pyrene	0.210	0.020	"	0.200	ND	105	70-130	1.44	20	
Surrogate: Fluorene-d10	*200*		*ug/kg*	*200*		*99.5*	*60-130*			
Surrogate: Anthracene-d10	*190*		*"*	*200*		*94.6*	*60-130*			
Surrogate: Pyrene-d10	*200*		*"*	*200*		*99.1*	*60-130*			
Surrogate: Benzo (a) pyrene-d12	*210*		*"*	*200*		*105*	*60-130*			

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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 B5E0638 - EPA 3550B										
Blank (B5E0638-BLK1)					Prepared: 05/06/2025 Analyzed: 05/07/2025					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	*22*		*"*	*24.9*		*86.9*	*50-150*			
LCS (B5E0638-BS1)					Prepared: 05/06/2025 Analyzed: 05/07/2025					
Diesel (C10-C28)	925	50.0	mg/kg	1000		92.5	70-130			
Residual Range Organics (C28-C40)	945	200	"	1000		94.5	70-130			
Surrogate: o-Terphenyl	*53*		*"*	*49.8*		*107*	*50-150*			
Matrix Spike (B5E0638-MS1)		**Source: E5E0202-01**			Prepared: 05/06/2025 Analyzed: 05/07/2025					
Diesel (C10-C28)	976	50.0	mg/kg	1000	ND	97.6	70-130			
Residual Range Organics (C28-C40)	1020	200	"	1000	ND	102	70-130			
Surrogate: o-Terphenyl	*56*		*"*	*49.8*		*112*	*50-150*			
Matrix Spike Dup (B5E0638-MSD1)		**Source: E5E0202-01**			Prepared: 05/06/2025 Analyzed: 05/07/2025					
Diesel (C10-C28)	918	50.0	mg/kg	1000	ND	91.8	70-130	6.08	35	
Residual Range Organics (C28-C40)	963	200	"	1000	ND	96.3	70-130	5.86	35	
Surrogate: o-Terphenyl	*54*		*"*	*49.8*		*108*	*50-150*			

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Jen Pellegrini For Jordan A. Bynon, Project Manager

CTEH
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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 B5E0605 - EPA 3050B										
Blank (B5E0605-BLK1)				Prepared: 05/06/2025 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 (B5E0605-BS1)				Prepared: 05/06/2025 Analyzed: 05/07/2025						
Arsenic	4.67	0.290	mg/kg	5.00		93.4	80-120			
Barium	455	82.0	"	500		91.0	80-120			
Cadmium	4.68	0.380	"	5.00		93.6	80-120			
Copper	43.6	46.0	"	50.0		87.1	80-120			U
Lead	4.63	14.0	"	5.00		92.7	80-120			U
Nickel	4.73	26.0	"	5.00		94.6	80-120			U
Selenium	4.75	0.260	"	5.00		95.0	80-120			
Silver	4.46	0.800	"	5.00		89.1	80-120			
Zinc	45.4	370	"	50.0		90.8	80-120			U
Matrix Spike (B5E0605-MS1)		**Source: E5E0202-01**		Prepared: 05/06/2025 Analyzed: 05/06/2025						
Arsenic	9.28	0.246	mg/kg	4.24	5.18	96.6	75-125			
Barium	626	69.6	"	424	79.9	129	75-125			QM-07
Cadmium	5.97	0.322	"	4.24	0.221	136	75-125			QM-07
Copper	62.5	39.0	"	42.4	11.1	121	75-125			
Lead	14.3	11.9	"	4.24	8.83	128	75-125			QM-07

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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
Batch B5E0605 - EPA 3050B										
Matrix Spike (B5E0605-MS1)		**Source: E5E0202-01**			Prepared: 05/06/2025 Analyzed: 05/06/2025					
Nickel	12.9	22.1	mg/kg	4.24	8.16	112	75-125			U
Selenium	5.38	0.221	"	4.24	0.408	117	75-125			
Silver	5.27	0.679	"	4.24	0.0257	124	75-125			
Zinc	91.2	314	"	42.4	43.2	113	75-125			U
Matrix Spike Dup (B5E0605-MSD1)		**Source: E5E0202-01**			Prepared: 05/06/2025 Analyzed: 05/06/2025					
Arsenic	9.15	0.242	mg/kg	4.18	5.18	95.2	75-125	1.33	20	
Barium	533	68.5	"	418	79.9	108	75-125	16.0	20	
Cadmium	5.17	0.317	"	4.18	0.221	118	75-125	14.5	20	
Copper	53.7	38.4	"	41.8	11.1	102	75-125	15.1	20	
Lead	12.9	11.7	"	4.18	8.83	96.7	75-125	10.3	20	
Nickel	11.7	21.7	"	4.18	8.16	83.8	75-125	10.3	20	U
Selenium	4.73	0.217	"	4.18	0.408	104	75-125	12.8	20	
Silver	4.62	0.668	"	4.18	0.0257	110	75-125	13.1	20	
Zinc	81.2	309	"	41.8	43.2	91.1	75-125	11.5	20	U

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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

Saturated Paste - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B5E0621 - Saturated Paste pH/EC										
Blank (B5E0621-BLK1)					Prepared: 05/06/2025 Analyzed: 05/07/2025					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							U
Duplicate (B5E0621-DUP1)			**Source: E5E0202-01**		Prepared: 05/06/2025 Analyzed: 05/07/2025					
pH	8.31		pH Units		8.30			0.120	25	
Specific Conductance (EC)	4.89	0.00500	mmhos/cm		4.81			1.65	25	

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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

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 B5E0628 - EPA 5030 (soil)										
Blank (B5E0628-BLK1)					Prepared: 05/06/2025 Analyzed: 05/06/2025					
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	*0.14*		"	*0.125*		*115*	*70-130*			
Surrogate: Toluene-d8	*0.13*		"	*0.125*		*104*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.13*		"	*0.125*		*101*	*70-130*			
LCS (B5E0628-BS1)					Prepared: 05/06/2025 Analyzed: 05/06/2025					
1,2,4-Trimethylbenzene	0.101	0.00200	mg/kg	0.100		101	70-130			
1,3,5-Trimethylbenzene	0.103	0.00200	"	0.100		103	70-130			
Benzene	0.0990	0.00200	"	0.100		99.0	70-130			
Ethylbenzene	0.100	0.00200	"	0.100		100	70-130			
Naphthalene	0.0880	0.00380	"	0.100		88.0	70-130			
Toluene	0.0997	0.00200	"	0.100		99.7	70-130			
o-Xylene	0.0979	0.00200	"	0.100		97.9	70-130			
m,p-Xylene	0.197	0.00400	"	0.200		98.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.14*		"	*0.125*		*113*	*70-130*			
Surrogate: Toluene-d8	*0.13*		"	*0.125*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.12*		"	*0.125*		*93.6*	*70-130*			
Matrix Spike (B5E0628-MS1)		**Source: E5E0202-01**			Prepared: 05/06/2025 Analyzed: 05/06/2025					
1,2,4-Trimethylbenzene	0.0861	0.00200	mg/kg	0.100	ND	86.1	70-130			

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Jen Pellegrini For Jordan A. Bynon, Project Manager

CTEH
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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
Batch B5E0628 - EPA 5030 (soil)										
Matrix Spike (B5E0628-MS1)		**Source: E5E0202-01**			Prepared: 05/06/2025 Analyzed: 05/06/2025					
1,3,5-Trimethylbenzene	0.0891	0.00200	mg/kg	0.100	ND	89.1	70-130			
Benzene	0.0942	0.00200	"	0.100	ND	94.2	70-130			
Ethylbenzene	0.0920	0.00200	"	0.100	ND	92.0	70-130			
Naphthalene	0.0674	0.00380	"	0.100	ND	67.4	70-130			QM-07
Toluene	0.0907	0.00200	"	0.100	ND	90.7	70-130			
o-Xylene	0.0910	0.00200	"	0.100	ND	91.0	70-130			
m,p-Xylene	0.180	0.00400	"	0.200	ND	90.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.15*		"	*0.125*		*121*	*70-130*			
Surrogate: Toluene-d8	*0.13*		"	*0.125*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.12*		"	*0.125*		*96.8*	*70-130*			
Matrix Spike Dup (B5E0628-MSD1)		**Source: E5E0202-01**			Prepared: 05/06/2025 Analyzed: 05/06/2025					
1,2,4-Trimethylbenzene	0.0808	0.00200	mg/kg	0.100	ND	80.8	70-130	6.40	20	
1,3,5-Trimethylbenzene	0.0827	0.00200	"	0.100	ND	82.7	70-130	7.47	20	
Benzene	0.0885	0.00200	"	0.100	ND	88.5	70-130	6.20	20	
Ethylbenzene	0.0870	0.00200	"	0.100	ND	87.0	70-130	5.59	20	
Naphthalene	0.0676	0.00380	"	0.100	ND	67.6	70-130	0.355	20	QM-07
Toluene	0.0854	0.00200	"	0.100	ND	85.4	70-130	6.06	20	
o-Xylene	0.0864	0.00200	"	0.100	ND	86.4	70-130	5.17	20	
m,p-Xylene	0.170	0.00400	"	0.200	ND	84.9	70-130	5.78	20	
Surrogate: 1,2-Dichloroethane-d4	*0.15*		"	*0.125*		*118*	*70-130*			
Surrogate: Toluene-d8	*0.13*		"	*0.125*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.12*		"	*0.125*		*98.3*	*70-130*			

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Jen Pellegrini For Jordan A. Bynon, Project Manager

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

Notes and Definitions

U Sample is Non-Detect.

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

Jen Pellegrini For Jordan A. Bynon, Project Manager

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