



14701 and 14755 Aurora Avenue North Pepper Hill Shopping Center Site Shoreline, Washington

Pepper Hill Shopping Center Sub-Slab Soil Vapor Sample Locations

Summary of Volatile Organic Compounds in Sub-Slab Soil Vapor, December 2020, December 2022, January 2023 Pepper Hill Shopping Center Site Shoreline, Washington

Sample ID	KVP.			KVP-2	KVP-2/KVP.	KVP3	KVP-3/KVC	Ŷ.	KVP4		KVPS		Commercia Sub Sub Soil Cas Screening Vorter Tomercal Januar Table	"'uany 2023
Sample Date	12/30/20	12/8/22	01/26/23	12/30/20	12/8/22	12/30/20	12/8/22	01/26/23	12/30/20	12/8/22	12/30/20	12/8/22		ĺ
Benzene	1.07	<0.193	<3.19	0.302	<0.193	0.242	<0.193	<3.19	0.293	<0.193	0.298	<0.193	50.0	İ
Chloroform (Trichloromethane)	0.918	2.39	<0.0937	0.301	4.28	0.319	61.0	<0.0937	0.474	1.58	0.325	2.43	17.0	İ
cis-1,2-Dichloroethene	< 0.0793	<0.194	2.86	0.112	156	< 0.0793	<0.194	6.09	< 0.0793	<0.194	0.278	1.01	5,200	
Tetrachloroethene (PCE)	664	1,990	63.1	114	1,210	135	378	23.1	187	1,010	204	386	1,500	
Trichloroethene (TCE)	4.64	2.58	1.21	17.9	22.1	6.73	1.32	2.01	4.16	3.81	7.62	4.85	95.0	1
Vinyl chloride (Chloroethene)	< 0.217	<0.398	<1.98	<0.217	<0.398	<0.217	<0.398	<1.98	<0.217	<0.398	<0.217	<0.398	44.0	

Notes:

All values listed in µg/m³ (micrograms per cubic meter)

Bold concentrations are detected above the method reporting limit.

Shaded and Bold concentrations are above the MTCA Method B Sub-Slab Soil Gas Screening Levels Commercial Worker Table - January 2023.



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Seattle, WA 98103
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info@fremontanalytical.com

Kane Environmental, Inc. Nate Evenson 4015 13th Ave W. Seattle, Washington 98103

RE: Pepper Hill SV

Work Order Number: 2212186

December 21, 2022

Attention Nate Evenson:

Fremont Analytical, Inc. received 5 sample(s) on 12/8/2022 for the analyses presented in the following report.

Helium by GC/TCD Volatile Organic Compounds by EPA Method TO-15

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Date: 12/21/2022



CLIENT: Kane Environmental, Inc. Work Order Sample Summary

Project: Pepper Hill SV Work Order: 2212186

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2212186-001	KVP-1	12/08/2022 10:40 AM	12/08/2022 2:44 PM
2212186-002	KVP-4	12/08/2022 11:30 AM	12/08/2022 2:44 PM
2212186-003	KVP-5	12/08/2022 11:50 AM	12/08/2022 2:44 PM
2212186-004	KVP-6	12/08/2022 1:30 PM	12/08/2022 2:44 PM
2212186-005	KVP-7	12/08/2022 1:50 PM	12/08/2022 2:44 PM



Case Narrative

WO#: **2212186**Date: **12/21/2022**

CLIENT: Kane Environmental, Inc.

Project: Pepper Hill SV

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Air samples are reported in ppbv and ug/m3.

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

Original



Qualifiers & Acronyms

WO#: **2212186**

Date Reported: 12/21/2022

Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

Acronyms:

%Rec - Percent Recovery

CCB - Continued Calibration Blank

CCV - Continued Calibration Verification

DF - Dilution Factor

DUP - Sample Duplicate

HEM - Hexane Extractable Material

ICV - Initial Calibration Verification

LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate

MCL - Maximum Contaminant Level

MB or MBLANK - Method Blank

MDL - Method Detection Limit

MS/MSD - Matrix Spike / Matrix Spike Duplicate

PDS - Post Digestion Spike

Ref Val - Reference Value

REP - Sample Replicate

RL - Reporting Limit

RPD - Relative Percent Difference

SD - Serial Dilution

SGT - Silica Gel Treatment

SPK - Spike

Surr - Surrogate



Analytical Report

Work Order: **2212186**Date Reported: **12/21/2022**

CLIENT: Kane Environmental, Inc.

Project: Pepper Hill SV

Lab ID: 2212186-001 **Collection Date:** 12/8/2022 10:40:00 AM

Client Sample ID: KVP-1 Matrix: Soil Gas

Analyses Result RL Qual Units DF Date Analyzed

Helium by GC/TCD Batch ID: R80649 Analyst: SG

Helium ND 0.400 D % 2 12/21/2022 9:57:00 AM

Lab ID: 2212186-002 **Collection Date:** 12/8/2022 11:30:00 AM

Client Sample ID: KVP-4 Matrix: Soil Gas

Analyses Result RL Qual Units DF Date Analyzed

Helium by GC/TCD Batch ID: R80649 Analyst: SG

Helium ND 0.400 D % 2 12/21/2022 10:46:00 AM

Lab ID: 2212186-003 **Collection Date:** 12/8/2022 11:50:00 AM

Client Sample ID: KVP-5 Matrix: Soil Gas

Analyses Result RL Qual Units DF Date Analyzed

Helium by GC/TCD Batch ID: R80649 Analyst: SG

Helium ND 0.400 D % 2 12/21/2022 10:56:00 AM

Lab ID: 2212186-004 **Collection Date:** 12/8/2022 1:30:00 PM

Client Sample ID: KVP-6 Matrix: Soil Gas

Analyses Result RL Qual Units DF Date Analyzed

Helium by GC/TCD Batch ID: R80649 Analyst: SG

Helium ND 0.400 D % 2 12/21/2022 11:06:00 AM

Original



Analytical Report

Work Order: **2212186**Date Reported: **12/21/2022**

CLIENT: Kane Environmental, Inc.

Project: Pepper Hill SV

Lab ID: 2212186-005 **Collection Date:** 12/8/2022 1:50:00 PM

Client Sample ID: KVP-7 Matrix: Soil Gas

Analyses Result RL Qual Units DF Date Analyzed

Helium by GC/TCD Batch ID: R80649 Analyst: SG

Helium ND 0.400 D % 2 12/21/2022 11:14:00 AM



WorkOrder: 2212186

Project: Pepper Hill SV

 Client Sample ID:
 KVP-1
 Date Sampled:
 12/8/2022

 Lab ID:
 2212186-001A
 Date Received:
 12/8/2022

Analyte	Concen	tration	Reportii	ng Limit	Qual	Method	Date/Analy	/st
Volatile Organic Compounds b	y EPA Method TO	<u>D-15</u>						
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
Benzene	<0.0604	<0.193	0.0604	0.193		EPA-TO-15	12/19/2022	MS
Chloroform	0.489	2.39	0.00384	0.0187		EPA-TO-15	12/19/2022	MS
cis-1,2-Dichloroethene	< 0.0490	<0.194	0.0490	0.194		EPA-TO-15	12/19/2022	MS
Tetrachloroethene (PCE)	294	1,990	0.222	1.51		EPA-TO-15	12/19/2022	MS
Trichloroethene (TCE)	0.481	2.58	0.00250	0.0134		EPA-TO-15	12/19/2022	MS
Vinyl chloride	<0.155	< 0.396	0.155	0.396		EPA-TO-15	12/19/2022	MS
Surr: 4-Bromofluorobenzene	73.4 %Rec		70-130			EPA-TO-15	12/19/2022	MS



WorkOrder: 2212186

Project: Pepper Hill SV

 Client Sample ID:
 KVP-4
 Date Sampled:
 12/8/2022

 Lab ID:
 2212186-002A
 Date Received:
 12/8/2022

Analyte	Concentration		Reporti	Reporting Limit		Method	Date/Analy	/st
Volatile Organic Compounds b	y EPA Method TO	<u>D-15</u>						
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
Benzene	< 0.0604	<0.193	0.0604	0.193		EPA-TO-15	12/19/2022	MS
Chloroform	0.317	1.55	0.00384	0.0187		EPA-TO-15	12/19/2022	MS
cis-1,2-Dichloroethene	< 0.0490	<0.194	0.0490	0.194		EPA-TO-15	12/19/2022	MS
Tetrachloroethene (PCE)	150	1,010	0.222	1.51		EPA-TO-15	12/19/2022	MS
Trichloroethene (TCE)	0.708	3.81	0.00250	0.0134		EPA-TO-15	12/19/2022	MS
Vinyl chloride	<0.155	< 0.396	0.155	0.396		EPA-TO-15	12/19/2022	MS
Surr: 4-Bromofluorobenzene	72.6 %Rec		70-130			EPA-TO-15	12/19/2022	MS



WorkOrder: 2212186

Project: Pepper Hill SV

 Client Sample ID:
 KVP-5
 Date Sampled:
 12/8/2022

 Lab ID:
 2212186-003A
 Date Received:
 12/8/2022

Analyte	Concen	Concentration Reporting Limit		Qual	Method	Date/Analy	/st	
Volatile Organic Compounds b	y EPA Method TO	<u>D-15</u>						
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
Benzene	< 0.0604	<0.193	0.0604	0.193		EPA-TO-15	12/19/2022	MS
Chloroform	0.498	2.43	0.00384	0.0187		EPA-TO-15	12/19/2022	MS
cis-1,2-Dichloroethene	0.254	1.01	0.0490	0.194		EPA-TO-15	12/19/2022	MS
Tetrachloroethene (PCE)	56.9	386	0.222	1.51		EPA-TO-15	12/19/2022	MS
Trichloroethene (TCE)	0.902	4.85	0.00250	0.0134		EPA-TO-15	12/19/2022	MS
Vinyl chloride	<0.155	< 0.396	0.155	0.396		EPA-TO-15	12/19/2022	MS
Surr: 4-Bromofluorobenzene	70.9 %Rec		70-130			EPA-TO-15	12/19/2022	MS



WorkOrder: 2212186

Project: Pepper Hill SV

 Client Sample ID:
 KVP-6
 Date Sampled:
 12/8/2022

 Lab ID:
 2212186-004A
 Date Received:
 12/8/2022

Analyte	Concen	tration	Reporting Limit		Qual	Method	Date/Analy	/st
Volatile Organic Compounds b	y EPA Method TO	<u>D-15</u>						
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
Benzene	0.177	0.566	0.0604	0.193		EPA-TO-15	12/19/2022	MS
Chloroform	0.876	4.28	0.00384	0.0187		EPA-TO-15	12/19/2022	MS
cis-1,2-Dichloroethene	39.2	156	0.0490	0.194		EPA-TO-15	12/19/2022	MS
Tetrachloroethene (PCE)	178	1,210	0.222	1.51		EPA-TO-15	12/19/2022	MS
Trichloroethene (TCE)	4.11	22.1	0.00250	0.0134		EPA-TO-15	12/19/2022	MS
Vinyl chloride	<0.155	< 0.396	0.155	0.396		EPA-TO-15	12/19/2022	MS
Surr: 4-Bromofluorobenzene	80.5 %Rec		70-130			EPA-TO-15	12/19/2022	MS



WorkOrder: 2212186

Project: Pepper Hill SV

 Client Sample ID:
 KVP-7
 Date Sampled:
 12/8/2022

 Lab ID:
 2212186-005A
 Date Received:
 12/8/2022

Analyte	Concen	tration	Reportii	Reporting Limit		Method	Date/Analy	/st
Volatile Organic Compounds b	y EPA Method TO	<u>D-15</u>						
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
Benzene	0.0765	0.244	0.0604	0.193		EPA-TO-15	12/19/2022	MS
Chloroform	12.5	61.0	0.00384	0.0187		EPA-TO-15	12/19/2022	MS
cis-1,2-Dichloroethene	< 0.0490	<0.194	0.0490	0.194		EPA-TO-15	12/19/2022	MS
Tetrachloroethene (PCE)	55.8	378	0.222	1.51		EPA-TO-15	12/19/2022	MS
Trichloroethene (TCE)	0.246	1.32	0.00250	0.0134		EPA-TO-15	12/19/2022	MS
Vinyl chloride	<0.155	< 0.396	0.155	0.396		EPA-TO-15	12/19/2022	MS
Surr: 4-Bromofluorobenzene	74.5 %Rec		70-130			EPA-TO-15	12/19/2022	MS

Date: 12/21/2022



Work Order: 2212186

CLIENT:

Analyte

Kane Environmental, Inc.

Project: Pepper Hill SV **QC SUMMARY REPORT**

%RPD RPDLimit

Qual

Helium by GC/TCD

Sample ID: MB SampType: MBLK Units: % Prep Date: 12/21/2022 RunNo: 80649

Analysis Date: 12/21/2022 Client ID: MBLKW Batch ID: R80649 SeqNo: 1667933

Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual Analyte

ND Helium 0.200

Sample ID: LCS 5% SampType: LCS Units: % Prep Date: 12/21/2022 RunNo: 80649

Client ID: LCSW Analysis Date: 12/21/2022 Batch ID: R80649 SeqNo: 1667932

Analyte LowLimit HighLimit RPD Ref Val Result RL SPK value SPK Ref Val %REC %RPD RPDLimit Qual

Helium 5.27 0.200 5.000 0 105 80 120

RL

Result

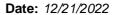
Sample ID: 2212186-001AREP SampType: REP Units: % Prep Date: 12/21/2022 RunNo: 80649

Client ID: KVP-1 Batch ID: R80649 Analysis Date: 12/21/2022 SeqNo: 1667921 SPK value SPK Ref Val

ND D Helium 0.400 0 30

%REC LowLimit HighLimit RPD Ref Val

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Surr: 4-Bromofluorobenzene

6.09

QC SUMMARY REPORT

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Kane Environmental, Inc. **CLIENT:**

Volatile Organic Compounds by EPA Method TO-15

Project: Pepper Hill	SV					Volatile	e Organio	c Compoun	ds by EPA	\ Method	TO-
Sample ID: LCS-R80621	SampType: LC	s		Units: ppbv		Prep Da	ate: 12/19/2	2022	RunNo: 80 6	521	
Client ID: LCSW	Batch ID: R8	30621				Analysis Da	ate: 12/19/2	2022	SeqNo: 166	37151	
Analyte	Resu	ılt RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	2.1	7 0.0774	2.000	0	108	70	130				
cis-1,2-Dichloroethene	1.9	0.0245	2.000	0	99.6	70	130				
Chloroform	2.0	0.00192	2.000	0	104	70	130				
Benzene	2.0	0.0302	2.000	0	101	70	130				
Trichloroethene (TCE)	2.0	0.00125	2.000	0	100	70	130				
Tetrachloroethene (PCE)	2.0	0.0111	2.000	0	100	70	130				
Surr: 4-Bromofluorobenzene	4.1	5	4.000		104	70	130				
Sample ID: MB-R80621	SampType: ME	BLK		Units: ppbv		Prep Da	ate: 12/19/2	2022	RunNo: 80 6	 621	
Client ID: MBLKW	Batch ID: R8	30621				Analysis Da	ate: 12/19/2	2022	SeqNo: 166	37152	
Analyte	Resu	ılt RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	N	D 0.0774									
cis-1,2-Dichloroethene	N	D 0.0245									
Chloroform	N	D 0.00192									
Benzene	N	D 0.0302									
Trichloroethene (TCE)	N	D 0.00125									
Tetrachloroethene (PCE)	N	D 0.0111									
Surr: 4-Bromofluorobenzene	3.1	7	4.000		79.2	70	130				
Sample ID: 2212186-001AREP	SampType: RE	EP		Units: ppbv		Prep Da	ate: 12/19/2	2022	RunNo: 806	 621	
Client ID: KVP-1	Batch ID: R8	30621				Analysis Da	ate: 12/19/2	2022	SeqNo: 166	37154	
Analyte	Resu	ılt RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	N	D 0.155						0		25	
cis-1,2-Dichloroethene	N	D 0.0490						0		25	
Chloroform	0.48	0.00384						0.4888	1.60	25	
Benzene	N	D 0.0604						0		25	
Trichloroethene (TCE)	0.46							0.4808	3.60	25	
Tetrachloroethene (PCE)	23	0.0222						236.9	2.74	25	Ε
0 45 " 1			0.000		70 .				_		

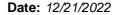
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76.1

70

130

8.000





QC SUMMARY REPORT

CLIENT: Kane Environmental, Inc.

Volatile Organic Compounds by EPA Method TO-15

Project: Pepper Hill SV
Sample ID: 2212186-001AREP

Units: ppbv

Prep Date: 12/19/2022

RunNo: 80621

Client ID: KVP-1

SampType: REP

...

Analysis Date: 12/19/2022

SeqNo: 1667154

CHELLID. KVF-

Analyte

Batch ID: R80621

Result

SPK value SPK Ref Val

%REC LowLimit HighLimit RPD Ref Val

%RPD RPDLimit Qual

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Sample Log-In Check List

Client Name:	KANE	Work Order Numb	er: 2212186	
Logged by:	Clare Griggs	Date Received:	12/8/2022	2:44:00 PM
Chain of Cus	stody			
1. Is Chain of	Custody complete?	Yes 🗹	No 🗌	Not Present
2. How was th	ne sample delivered?	Client		
<u>Log In</u>				
Coolers are	e present?	Yes	No 🗸	NA \square
		Air Samples		
4. Shipping co	ontainer/cooler in good condition?	Yes 🗸	No \square	
	eals present on shipping container/cooler? comments for Custody Seals not intact)	Yes	No \square	Not Present ✓
6. Was an atte	empt made to cool the samples?	Yes	No \square	NA 🗹
7. Were all ite	ems received at a temperature of >2°C to 6°C *	Yes	No 🗌	NA 🗸
8. Sample(s)	in proper container(s)?	Yes 🗸	No \square	
Sufficient s	ample volume for indicated test(s)?	Yes 🗸	No \square	
10. Are sample	es properly preserved?	Yes 🗹	No \square	
11. Was prese	rvative added to bottles?	Yes	No 🗸	NA \square
12. Is there hea	adspace in the VOA vials?	Yes	No \square	NA 🗹
13. Did all sam	ples containers arrive in good condition(unbroken)?	Yes 🗸	No 🗌	
14. Does paper	rwork match bottle labels?	Yes 🗹	No 🗌	
15. Are matrice	es correctly identified on Chain of Custody?	Yes 🗸	No 🗌	
16. Is it clear w	hat analyses were requested?	Yes 🗸	No 🗌	
17. Were all ho	olding times able to be met?	Yes 🗸	No 🗌	
Special Hand	dling (if applicable)			
18. Was client	notified of all discrepancies with this order?	Yes	No 🗌	NA 🗹
Perso	n Notified: Date	:		
By Wi	•		one Fax [In Person
Regar	-			
	Instructions:			
	r			

19. Additional remarks:

Item Information

Original

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

of 2	Page 1 of 2									500 AL 1 6 3 18 31	
			,	×						×	
	Date/Time	Print Name	Received (Signature)	Receiv	Date/Time			Print Name		Relinguished (Signature)	
24.	NH-112/80/21 + 12	A LIVE BUW	A PA	143.7 x	128/22	a ca	S 52 S	YIC Name	E .	Relinquished (Signature)	
	2 Day specify Date Time	Print Name	HAVE VELIMEN CHEM 3 ASI COMON	named above, that I	half of the Client	alytical on be	remont An	ment with F	nter into this Agree	I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Cheff named above, that I am ever new Cheff named above, that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Cheff named above, that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Cheff named above, that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Cheff named above, that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Cheff named above, that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Cheff named above, that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Cheff named above, that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Cheff named above, that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Cheff named above, that I am authorized to enter into the Cheff named above, that I am authorized to enter into the Cheff named above, the Cheff named above the Cheff	
	L Soay	h of the terms on the front and	Control Client's agreement		Other, specify in comments	Other, specif	8	PCE & Breakdown	ΛPH ☐ PCE 8	*** Select one: BTEXN & APH	
	- ,	IB = lediar Bag	F = Filter S = Sorbent Tube	CYL = High Pressure Cylinder	CYL = High Pro	1L = 1L Canister		6L = 6L Canister	ottle Vac	** Container Codes: BV = 1 Lite	
	Turn-Around Time:	gester	L = Landfill	SVE = SV	S = Subslab / Soil Gas	= Indoor Air	IA = Inc	OA = Outdoor Air		* Matrix Codes: AA = Ambient Air	
		×	Tone Pressure	Pressure 1	L INS Date	150mL/ min	1		11408	KVPY	
	1 5	×	imal Pressure	Præssure 13	-	. 150mL/ min	<u> </u>	ag. Ser	4879 Cannel Flow Rd Flow Rd	KUP-6	
	1-4	×	Date Z	Pressure 176		150mL/ min	<u></u>	5	11411 Canus FC-10 Flow Re	148-5	
	1-4	×	Bate S X	12/8 Da	12/8 Date	150mL/ min	 	<u>ا</u> ا	11399 Canisi FC-11 Flow Re	KV7-4	
1	348	×	12/8	-30 1040	10/3 Bate 10/1	150mL/ min	P	\(\sqrt{2} \)	4687 Canist FC-18 Flow Re	KVP-1	
17.19.17		APH TO15 Silloxanes TO15 Sulfur TO15 Major Gases 3C Helium 3C Mod VOCs 8260 GX/BTEX 8260	Full list VOCs TO15 Select VOCs TO15	Field initial Sample Pressure (" Hg) Date & Time	w Sample Start Date & Time	Expected Fill ner Time / Flow	pe Container Type **	eg Sample Ty (Matrix)	Canister / Flow Reg Sample Type Serial # (Matrix) *	Sample Name	
	internal	Analysis and	3 Kowe-environ	Email (PM): CNCLSSocy	Email (PM):	1				Fax:	
	otherwise requested. OK to Dispose Hold (fees may apply)	otherwise requested. OK to	Nasseur	Trace.	Reports to (PM):			7	24 ho-1139	206-	
	fter report is submitted to client unless	Sew Line		En	Collected by:	2	98119	NS	9	City, State, Zip: Sea H	_
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P	1317 DOL		- 6	56811-6	Project No:					_{client:} Kane	
age 16 c		Special Remarks: VOCs	Page: 1	Epper 1	Date: Project Name	Seattle, WA 98103 Tel: 206-352-3790 Fax: 206-352-7178	Seat Tel: Fax:		Amalyrical		
of 16	Laboratory Services Agreement	<u>2</u>	of Custody Reco	Air Chain		3600 Fremont Ave N.	3600 F	5	3		



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc. John Kane 4015 13th Ave W.

Seattle, Washington 98103

RE: Pepper Hill

Work Order Number: 2301502

March 06, 2023

Attention John Kane:

Fremont Analytical, Inc. received 2 sample(s) on 1/26/2023 for the analyses presented in the following report.

Helium by GC/TCD Volatile Organic Compounds by EPA Method TO-15

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Date: 03/06/2023



CLIENT: Kane Environmental, Inc. Work Order Sample Summary

Project: Pepper Hill Work Order: 2301502

 Lab Sample ID
 Client Sample ID
 Date/Time Collected
 Date/Time Received

 2301502-001
 KVP-1
 01/26/2023 11:14 AM
 01/26/2023 4:57 PM

 2301502-002
 KVP-7
 01/26/2023 11:40 AM
 01/26/2023 4:57 PM



Case Narrative

WO#: **2301502**Date: **3/6/2023**

CLIENT: Kane Environmental, Inc.

Project: Pepper Hill

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Air samples are reported in ppbv and ug/m3.

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

Revision 1: Report is amended to include benzene.



Qualifiers & Acronyms

WO#: **2301502**

Date Reported: 3/6/2023

Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

Acronyms:

%Rec - Percent Recovery

CCB - Continued Calibration Blank

CCV - Continued Calibration Verification

DF - Dilution Factor

DUP - Sample Duplicate

HEM - Hexane Extractable Material

ICV - Initial Calibration Verification

LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate

MCL - Maximum Contaminant Level

MB or MBLANK - Method Blank

MDL - Method Detection Limit

MS/MSD - Matrix Spike / Matrix Spike Duplicate

PDS - Post Digestion Spike

Ref Val - Reference Value

REP - Sample Replicate

RL - Reporting Limit

RPD - Relative Percent Difference

SD - Serial Dilution

SGT - Silica Gel Treatment

SPK - Spike

Surr - Surrogate



Analytical Report

Work Order: **2301502**Date Reported: **3/6/2023**

Client: Kane Environmental, Inc. Collection Date: 1/26/2023 11:14:00 AM

Project: Pepper Hill

Lab ID: 2301502-001 **Matrix:** Soil Gas

Client Sample ID: KVP-1

Analyses Result RLQual **Units** DF **Date Analyzed Helium by GC/TCD** Batch ID: R81692 Analyst: LB Helium ND 0.300 D 1.5 2/7/2023 11:03:00 AM



Analytical Report

Work Order: **2301502**Date Reported: **3/6/2023**

Client: Kane Environmental, Inc. Collection Date: 1/26/2023 11:40:00 AM

Project: Pepper Hill

Lab ID: 2301502-002 **Matrix:** Soil Gas

Client Sample ID: KVP-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Helium by GC/TCD				Batc	h ID: R8	1692 Analyst: LB
Helium	ND	0.300	D	%	1.5	2/7/2023 11:11:00 AM



WorkOrder: 2301502
Project: Pepper Hill

 Client Sample ID:
 KVP-1
 Date Sampled:
 1/26/2023

 Lab ID:
 2301502-001A
 Date Received:
 1/26/2023

Analyte	Concen	Concentration		Reporting Limit		Method	Date/Analy	st
Volatile Organic Compounds by	EPA Method TO	<u>-15</u>						
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
Benzene	<1.00	<3.19	1.00	3.19		EPA-TO-15	02/05/2023	MS
Chloroform	< 0.0192	< 0.0937	0.0192	0.0937		EPA-TO-15	02/05/2023	MS
cis-1,2-Dichloroethene	0.722	2.86	0.245	0.972		EPA-TO-15	02/05/2023	MS
Tetrachloroethene (PCE)	9.30	63.1	0.0444	0.301		EPA-TO-15	02/05/2023	MS
Trichloroethene (TCE)	0.224	1.21	0.00500	0.0269		EPA-TO-15	02/05/2023	MS
Vinyl chloride	<0.774	<1.98	0.774	1.98		EPA-TO-15	02/05/2023	MS
Surr: 4-Bromofluorobenzene	80.2 %Rec		70-130			EPA-TO-15	02/05/2023	MS

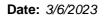


WorkOrder: 2301502
Project: Pepper Hill

 Client Sample ID:
 KVP-7
 Date Sampled:
 1/26/2023

 Lab ID:
 2301502-002A
 Date Received:
 1/26/2023

Analyte	Concen	tration	Reportii	ng Limit	Qual	Method	Date/Analy	st
Volatile Organic Compounds by	EPA Method TO	<u>-15</u>						
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
Benzene	<1.00	<3.19	1.00	3.19		EPA-TO-15	02/05/2023	MS
Chloroform	< 0.0192	<0.0937	0.0192	0.0937		EPA-TO-15	02/05/2023	MS
cis-1,2-Dichloroethene	1.54	6.09	0.245	0.972		EPA-TO-15	02/05/2023	MS
Tetrachloroethene (PCE)	3.40	23.1	0.111	0.753		EPA-TO-15	02/05/2023	MS
Trichloroethene (TCE)	0.375	2.01	0.0125	0.0672		EPA-TO-15	02/05/2023	MS
Vinyl chloride	<0.774	<1.98	0.774	1.98		EPA-TO-15	02/05/2023	MS
Surr: 4-Bromofluorobenzene	75.6 %Rec		70-130			EPA-TO-15	02/05/2023	MS





CLIENT:

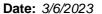
Kane Environmental, Inc.

QC SUMMARY REPORT

Helium by GC/TCD

Project: Pepper Hill						Heliam by GG/10L
Sample ID: LCS	SampType: LCS			Units: %	Prep Date: 2/7/2023	RunNo: 81692
Client ID: LCSW	Batch ID: R81692				Analysis Date: 2/7/2023	SeqNo: 1693322
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Helium	4.45	0.200	5.000	0	89.0 80 120	
Sample ID: MB	SampType: MBLK			Units: %	Prep Date: 2/7/2023	RunNo: 81692
Client ID: MBLKW	Batch ID: R81692				Analysis Date: 2/7/2023	SeqNo: 1693323
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Helium	ND	0.200				
Sample ID: 2301502-001AREP	SampType: REP			Units: %	Prep Date: 2/7/2023	RunNo: 81692
Client ID: KVP-1	Batch ID: R81692				Analysis Date: 2/7/2023	SeqNo: 1693317
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Helium	ND	0.300			0	30 D

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Chloroform

Trichloroethene (TCE)

Benzene

2.47

2.37

2.32

0.00192

0.00125

0.100

2.000

2.000

2.000

QC SUMMARY REPORT

CLIENT: Kane Environmental, Inc.

Volatile Organic Compounds by EPA Method TO-15

Project: Pepper Hill							Volatile	Organic	Compoun	ds by EPA	Method	TO-15
Sample ID: LCS-R81675	SampType	: LCS			Units: ppbv		Prep Dat	e: 2/4/202	3	RunNo: 816	675	
Client ID: LCSW	Batch ID:	R81675					Analysis Dat	e: 2/4/202	3	SeqNo: 169	2596	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)		2.15	0.00125	2.000	0	107	70	130				
Tetrachloroethene (PCE)		2.22	0.0111	2.000	0	111	70	130				
Surr: 4-Bromofluorobenzene		3.62		4.000		90.4	70	130				
Sample ID: MB-R81675	SampType	e: MBLK			Units: ppbv		Prep Dat	e: 2/5/202	3	RunNo: 816	675	
Client ID: MBLKW	Batch ID:	R81675					Analysis Dat	e: 2/5/202	3	SeqNo: 169	2597	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)		ND	0.00125									
Tetrachloroethene (PCE)		ND	0.0111									
Surr: 4-Bromofluorobenzene		3.47		4.000		86.7	70	130				
Sample ID: 2301467-002AREP	SampType	e: REP			Units: ppbv		Prep Dat	e: 2/5/202	3	RunNo: 816		
Client ID: BATCH	Batch ID:	R81675					Analysis Dat	e: 2/5/202	3	SeqNo: 169	2601	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)		0.124	0.00500						0.1291	3.89	25	
Tetrachloroethene (PCE)		0.177	0.0444						0.1838	3.93	25	
Surr: 4-Bromofluorobenzene		22.2		16.00		139	70	130		0		S
NOTES: S - Outlying surrogate recovery(i	ies) observed.	A duplicate	analysis wa	as performed v	vith similar results in	dicating a	possible mat	rix effect.				
Sample ID: LCS-R81676	SampType	e: LCS			Units: ppbv		Prep Dat	e: 2/5/202	3	RunNo: 816	576	
Client ID: LCSW	Batch ID:	R81676					Analysis Dat	e: 2/5/202	3	SeqNo: 169	2621	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride		1.73	0.0774	2.000	0	86.4	70	130				

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0

0

0

123

118

116

70

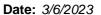
70

70

130

130

130





QC SUMMARY REPORT

CLIENT: Kane Environmental, Inc.

Volatile Organic Compounds by EPA Method TO-15

Project: Pepper Hi	I					Volatile (Organic Compoun	ids by EPA	A Method	TO-1
Sample ID: LCS-R81676	SampType: LCS			Units: ppbv		Prep Date:	2/5/2023	RunNo: 816	676	
Client ID: LCSW	Batch ID: R81676					Analysis Date	2/5/2023	SeqNo: 169	92621	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit F	HighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene (PCE)	2.15	0.0111	2.000	0	107	70	130			
Surr: 4-Bromofluorobenzene	3.87		4.000		96.7	70	130			
Sample ID: MB-R81676	SampType: MBLK			Units: ppbv		Prep Date:	2/5/2023	RunNo: 816	676	
Client ID: MBLKW	Batch ID: R81676					Analysis Date	2/5/2023	SeqNo: 169	2622	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.0774								
cis-1,2-Dichloroethene	ND	0.0245								
Chloroform	ND	0.00192								
Benzene	ND	0.100								
Trichloroethene (TCE)	ND	0.00125								
Tetrachloroethene (PCE)	ND	0.0111								
Surr: 4-Bromofluorobenzene	3.44		4.000		85.9	70	130			

Sample ID: 2301476-002AREP	SampType: REP			Units: ppbv		Prep Da	te: 2/6/202	23	RunNo: 81	676	
Client ID: BATCH	Batch ID: R81676					Analysis Da	te: 2/6/202	23	SeqNo: 16	92630	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.619						0		25	D
cis-1,2-Dichloroethene	ND	0.196						0		25	D
Chloroform	0.844	0.0153						0.9590	12.7	25	D
Benzene	3.37	0.800						2.743	20.4	25	D
Trichloroethene (TCE)	0.214	0.0100						0.1642	26.2	25	DR
Tetrachloroethene (PCE)	7.52	0.0888						7.833	4.09	25	D
Surr: 4-Bromofluorobenzene	31.8		32.00		99.5	70	130		0		D

NOTES:

R - High RPD observed.

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Sample Log-In Check List

С	lient Name:	KANE	Work Order Numb	per: 2301502		
Lo	ogged by:	Kate Porter	Date Received:	1/26/2023	4:57:00 PM	
Cha	in of Cust	<u>ody</u>				
1.	Is Chain of C	ustody complete?	Yes 🗸	No \square	Not Present	
2.	How was the	sample delivered?	Client			
Log	<u>ı In</u>					
3.	Coolers are p	present?	Yes	No 🗸	NA \square	
			Air Samples			
4.	Shipping con	tainer/cooler in good condition?	Yes 🗸	No \square		
5.		Is present on shipping container/cooler? nments for Custody Seals not intact)	Yes	No 🗌	Not Present ✓	
6.	Was an atter	npt made to cool the samples?	Yes	No 🗌	NA 🗸	
7.	Were all item	as received at a temperature of >2°C to 6°C *	Yes	No 🗌	NA 🗸	
8.	Sample(s) in	proper container(s)?	Yes 🗸	No \square		
9.	Sufficient sar	mple volume for indicated test(s)?	Yes 🗸	No \square		
10.	Are samples	properly preserved?	Yes 🗸	No \square		
11.	Was preserva	ative added to bottles?	Yes	No 🗸	NA \square	
12.	Is there head	Ispace in the VOA vials?	Yes	No \square	NA 🗹	
13.	Did all sampl	es containers arrive in good condition(unbroken)?	Yes 🗹	No \square		
14.	Does paperw	rork match bottle labels?	Yes 🗸	No 🗌		
15.	Are matrices	correctly identified on Chain of Custody?	Yes 🗹	No \square		
16.	Is it clear wha	at analyses were requested?	Yes 🗸	No \square		
17.	Were all hold	ling times able to be met?	Yes 🗸	No 🗌		
Spe	cial Handl	ing (if applicable)				
18.	Was client no	otified of all discrepancies with this order?	Yes	No 🗆	NA 🗹	
	Person	Notified: Date:				
	By Who		eMail Pho	one 🗌 Fax [In Person	
	Regardi	-				
	Client Ir	nstructions:				
10	Additional rer	marks:				

Item Information

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Page 1 of 2													
					×								×
	Date/Time	Print Name	R	nature)	Received (Signature	5 1637	Cb C	8	VûSSCW nt Name	VIC/VR	17	Signature)	Relinquished (Signature)
42:11 201	11/11)	Received (Signature)				me	Pri	-	signature)	Relinquished (Signature
specify	Date/Time	Print Name		erified Chent's a	e, that I have ve	t named abov	alf of the Clier	lytical on beh	emont Ana	ment with Fi	er into this Agree	I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have vertified Client's agreement to each backside of this Agreement.	I represent the backside of t
Same Day	☐ 3 Day	of the tarms on the front and					Other, specify in comments	Other, specifi	×	PCE & Breakdown	он □РСЕ 8	one: BTEXN & APH	*** Select one:
,		Tedlar Bag	TB =	er S = Sorbent Tube	nder F = Filter	CYL = High Pressure Cylinder	CYL = High	1L = 1L Canister		6L = 6L Canister		Container Codes: BV = 1 Liter Bottle Vac	** Contain
Next Day	Standard Next D		gester	L = Landfill	SVE = SVE		S = Subslab / Soil Gas		IA = Indoor Air	tdoor Air	\ir OA = Outdoor Air	odes: AA = Ambient Air	* Matrix Codes:
				e Pressure	Time	mo Pressu				<u> </u>	Flow Re		
				15	Dan					<u> 1</u> 8	SWED		v
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						5					Flow Rs.		4
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- Commence of the Commence of	- Juden					00000000	++		ı	2	Flow Re		2
		×	×	W W	1/26	-32	1/26	150mL/ min	=	S	4691 FC-20	_	KUP-1
Pressure ("Hg)	Comments	Major Ga Helium 3 VOCs 83 GX/BTE3	Select VO APH TO15 Siloxanes Sulfur TO	Pressure (" Hg)	Sample End Date & Time	Pressure (" Hg)	N Sample Start Date & Time	Expected Fill er Time / Flow Rate	e Container Type **	g Sample Typ (Matrix) *	Canister / Flow Reg Sample Type Serial # (Matrix) *	Sample Name	
Final		SC Mod	Cs TO15 *** TO15			Field Initial							
Internal		sis Cara	environ nentral	ene-en	0	Kowe	Email (PM):						Fax:
(fees may apply)	OK to Dispose Hold	therwise requested.	0	W.	in Keine	Reports to (PM): Tohan	Reports to (9270	9240-1199-900	Telephone:
ed to client unless	week after report is submitt	Air samples are disposed of one week after report is submitted to client unless	A			2	Collected by:			98119		city, State, Zip: See, Ho, WA	City, State, Zi
_		Benzene			Jarre	Shoreline	Location:				13th the W	4015 13tm	Address:
cru,	ide, chlorot	Viny 1 Chloride, Chloratorn,				5 6311-6	Project No:		4	l, Inc	nvivenmental	IT	client: Kane
	1CE, CIS-1,2-0CE	LCE ICE,				1				1	.		
		, 7			Pepper Hill		Project Name:	rax: 200-332-7170	rax:	10/0/8	MANUAL VALORIAN		
	9	and Bomerker 1 30	of:	Page:	23	26/2023	Date:	Tel: 206-352-3790	Tel:				
,	7201507	Laboratory Project No (Internal):						3600 Fremont Ave N.	3600 Fre	7		の回	
eement	Laboratory Services Agreement		Air Chain of Custody Record &	Custod	ain of	Air Ch							