## LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT

State Road 16 Parcel 1974 State Road 16 St. Augustine, St. Johns County, Florida UES Project No. 0940.2400115.0000 UES Report No. 2093292

Report Date: June 27, 2024

## **Prepared for:**

Wiles, LLC
520 Dunlawton Avenue
Port Orange, Florida 32127
Attention: Mr. Jack Wiles, Representing Agent

## **Prepared by:**

UES 5561 Florida Mining Boulevard South Jacksonville, Florida 32257 (904) 296-0757 www.TeamUES.com







Environmental
Geotechnical Engineering
Geophysical Technology
Materials Testing
Field Inspections & Code Compliance

June 27, 2024

Mr. Jack Wiles Representing Agent Wiles, LLC 520 Dunlawton Avenue Port Orange, Florida 32127

Reference: LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT

State Road 16 Parcel 1974 State Road 16

St. Augustine, St. Johns County, Florida UES Project No. 0940.2400115.0000

UES Report No. 2093292

Dear Mr. Wiles:

On behalf of Wiles, LLC (the "Client"), UES has completed this Limited Phase II ESA for the above-referenced property (the "subject property"). The purpose of this investigation was to assess the on-site RECs and VIC identified in the Phase I ESA report, dated May 29, 2024, conducted by UES.

Based on the results of the analytical data obtained from the Limited Phase II ESA, concentrations of the tested parameters for soil samples were below the applicable soil cleanup target levels as established in Chapter 62-777, F.A.C. Based on the above-referenced findings, we conclude that the RECs and VIC identified in UES's Phase I ESA, have been assessed and that no further assessment of the subject property appears warranted at this time.

UES appreciates this opportunity to provide environmental services to you and we look forward to future endeavors. If you have any comments or questions regarding the information contained within this report or if we can be of further service, please contact the undersigned.

Respectfully submitted,

UES

Written by:

Thomas M. Borchert, L.E.P.

**Environmental Department Manager** 

tborchert@TeamUES.com

Reviewed by:

James E. Adams

Senior Project Manager jadams@TeamUES.com

•

## **TABLE OF CONTENTS**

1.0	INTRODUCTION	1
2.0	LIMITING CONDITIONS AND RELIANCE	1
2.1	Limitations and Exceptions	
2.2	User Reliance	2
3.0	SOIL QUALITY ASSESSMENT	2
3.1	Soil Sampling and Collection Methodology	2
3.2	Site Lithology	3
4.0	GROUNDWATER QUALITY ASSESSMENT	3
5.0	ADDITIONAL SERVICES	3
6.0	QUALITY ASSURANCE/QUALITY CONTROL	4
7.0	FINDINGS	4
7.1	Soil Assessment Results	4
8.0	CONCLUSIONS & RECOMMENDATIONS	5
8.1	Conclusions	5
8.2	Recommendations	5

## LIST OF FIGURES, TABLES & APPENDICES

FIGURE	SS .	
	USGS Site Location Map	1
	Sample Location Plan	2
TABLES		
	Summary of Soil Analytes	ble 1
APPEN	DIX A	
	Soil Boring Logs	A
APPEN	DIX B	
	Laboratory Analytical Report & Chain-of-Custody Documentation	В
APPEN	DIX C	
	Benzo(a)pyrene Conversion Tables	C

## **GLOSSARY OF ENVIRONMENTAL ACRONYMS**

μg/L – Micrograms per Liter

AAI - All Appropriate Inquiry

AOC - Area of Concern

BaP - Benzo(a)pyrene

BLS - Below Land Surface

BTEX/MTBE - Benzene, Toluene, Ethylbenzene, Total Xylenes/Methyl Tert-Butyl Ether

COC - Chemicals of Concern

COJ-EQD - City of Jacksonville Environmental Quality Division

DEP-SOP-001/01 – FDEP's Standard Operating Procedures for Field Activities

ESA – Environmental Site Assessment

Eurofins – Eurofins Environmental Testing America/Air Toxic

F.A.C. - Florida Administrative Code

FDEP - Florida Department of Environmental Protection

FLPRO - Florida Petroleum Range Organics

GCTL - Groundwater Cleanup Target Level

MDL – Method Detection Limit

mg/Kg – Milligrams per Kilogram

NADC - Natural Attenuation Default Concentrations

NELAP - National Environmental Laboratory Accreditation Program

NGVD - National Geodetic Vertical Datum

OVM - Organic Vapor Monitor

PAHs - Polycyclic Aromatic Hydrocarbons

PCB - Polychlorinated Biphenyl

PID - Photo-Ionization Detector

PQL - Practical Quantitation Limit

PVC – Polyvinyl Chloride

QA/QC - Quality Assurance/Quality Control

RCRA – Resource Conservation and Recovery Act

REC - Recognized Environmental Condition

SCTL – Soil Cleanup Target Level

SIM - Selected Ion Monitoring

SPLP – Synthetic Precipitation Leaching Procedure

SVA - Soil Vapor Assessment

SVOCs - Semi Volatile Organic Compounds

TCLP – Toxicity Characteristic Leaching Procedure

TPQL - Target Practical Quantitation Level

TPHCWG – Total Petroleum Hydrocarbon Criteria Working Group

TransAmerican – TransAmerican Drilling & Testing, Inc.

TRPH - Total Recoverable Petroleum Hydrocarbons

UES – Universal Engineering Sciences

USGS - United States Geological Survey

UST - Underground Storage Tank

VEC - Vapor Encroachment Condition

VES - Vapor Encroachment Screening

VIC - Vapor Intrusion Condition

VISL - Vapor Intrusion Screening Level

VOCs - Volatile Organic Compounds

## 1.0 INTRODUCTION

UES was retained by Wiles, LLC (the "Client") to conduct a Limited Phase II Environmental Site Assessment (ESA) at State Road 16 Parcel (the "subject property"), located at 1974 State Road 16 in St. Augustine, St. Johns County, Florida. The subject property being assessed for this Limited Phase II ESA consists of a single tax parcel of land (St. Johns County Parcel ID No. 0875700000) located in Section 8, Township 7 South, Range 29 East as referenced on the USGS Topographic Quadrangle Map "Bakersville, Florida" (USGS Site Location Map) provided as **Figure 1**. At the time of the assessment, the subject property was occupied by an automotive sales and service facility.

The purpose of this investigation was to assess the on-site RECs and VIC identified in the Phase I ESA report, dated May 29, 2024, conducted by UES. Based on the findings and opinions of the Phase I ESA, UES identified the following REC and VIC in connection with the subject property:

- According to the property owner, a septic tank system is located north of the commercial buildings. Based on the historic use of the subject property which included the storage and use of hazardous substances and petroleum products, potential discharges to the septic system appear likely. Septic tanks can provide a pathway for contaminants to enter and impact shallow soil and groundwater. As such, the septic system is considered a REC at this time.
- The review of historical resources revealed that the subject property has been utilized as an autobody repair facility since at least 1995. In addition, UES observed oil-stained soil and poor housekeeping practices during the site reconnaissance. As such, UES regards the use of the subject property as an autobody repair facility as a REC and VIC.

### 2.0 LIMITING CONDITIONS AND RELIANCE

#### 2.1 Limitations and Exceptions

The findings of this report represent our professional judgment; UES offers or extends no warranty, expressed or implied. These findings are current with the dates of our site work and the information cited herein. The conclusions presented are based on the data provided, observations, and conditions that existed on the date of the on-site activities. This report should not be relied upon to represent property conditions on other dates or at locations other than those specifically cited within the report. UES can accept no responsibility for interpretations of these data made by other parties.

No ESA can eliminate all uncertainty. Furthermore, any sample, either surface or subsurface, taken for chemical analysis may or may not be representative of a larger population. Professional judgment and interpretation are inherent in the process and uncertainty is inevitable. Additional assessment may be able to reduce uncertainty.

Even when a Phase II ESA is performed with an appropriate site-specific standard of care, certain conditions present especially difficult detection problems. Such conditions may include, but are not limited to, complex geological settings, the fate and transport characteristics of certain hazardous

UES Project No. 0940.2400115.0000 UES Report No. 2093292 June 27, 2024

substances and petroleum products, the distribution of existing contamination, physical limitation imposed by the location of utilities and other man-made objects, and the limitation of assessment technologies. Phase II ESAs do not generally require an exhaustive assessment of environmental conditions on a property. If hazardous substances or petroleum products are confirmed on a parcel of property, the extent of further assessment is related to the degree of uncertainty that is acceptable to the user with respect to the real estate transaction.

In expressing the opinions stated in this report, UES has exercised the degree of skill and care ordinarily exercised by a reputable and competent environmental professional in the same area and time frame given the same facts and circumstances. Documentation and data provided by the Client or other interested parties, or from the public domain, and referred to in the preparation of this assessment, have been used and referenced with the understanding that UES assumes no responsibility or liability for their accuracy. The information contained in this report, including its conclusions, is based on the information that was made available to UES during the assessment and upon the services described that were performed. Because the report is based on available information, some of its conclusions could be different if the information upon which it is based is determined to be false, inaccurate, or contradicted by additional information.

#### 2.2 User Reliance

This report is intended for the sole use of Wiles, LLC. Its contents may not be relied upon by other parties for any purpose without the express written consent of UES. UES is not responsible for conclusions drawn by others upon review of the enclosed report. This is not a statement of the suitability of the property for any use or purpose. This assessment was conducted in accordance with the UES General Conditions, which are incorporated into the Client authorized agreement that governs this assessment (UES Proposal No.2091461, dated May 29, 2024).

### 3.0 SOIL QUALITY ASSESSMENT

### 3.1 Soil Sampling and Collection Methodology

On June 6, 2024, UES advanced three soil borings designated as SB-1 through SB-3, utilizing a stainless-steel hand auger. The soil sampling equipment was properly decontaminated before the initiation of each soil boring.

Discrete soil samples were collected at one-foot intervals from each soil boring from the existing grade to the termination of the soil boring (here feet bls). UES screened for visual/olfactory impacts and organic vapors using a MiniRAE 3000® PID Portable OVM. This instrument monitors VOCs using a PID and is used to screen for volatile organic vapors to a lower limit of one-tenth of one part per million (1/10 ppm) calibration gas equivalent. Before screening the soil samples, UES checked the device to ensure proper functioning and performed calibration protocols using isobutylene gas. The device was operated in hygiene/survey mode with a 10.6 eV lamp during the assessment. In Hygiene Mode, the unit continuously displays real-time VOC measurements in ppm. In Survey Mode, the instrument collects individual point data VOC measurements in ppm. Each soil sample collected was placed in a 16-ounce jar, filling it approximately half full. The jars were then covered with aluminum foil and the head space within the jar

was allowed to equilibrate. The soil samples were then measured by inserting the tip of the OVM through the foil to collect the soil vapor hydrocarbon measurement.

Discrete grab soil samples were collected from each soil boring at the depth interval corresponding to the highest OVM reading/at the soil water table interface due to the lack of detected elevated OVM measurements (as described in the table below). The soil samples were placed into laboratory-supplied sample containers, placed in a cooler with wet ice, and transported under proper chain-of-custody documentation to Eurofins, a NELAP-certified laboratory, for chemical analysis by the USEPA Methods noted in the following table:

#### **Soil Sample Details and Laboratory Analysis**

Soil Sample ID	Environmental Concern	Soil Sample Depth (feet bls)	PID Reading (ppm)	Laboratory Analysis
SB-1	Septic drainfield and washout area	1.0	5.0	BTEX/MTBE, PAHs, and TRPH
SB-3	Stained soil adjacent to the automotive garage	3.0	399	BTEX/MTBE, PAHs, and TRPH

Table Notes: BTEX/MTBE by 8260 PAHs by 8270 SIM TRPH by FLPRO

Soil cuttings generated during the installation of the soil borings were returned to their respective boreholes and generally restored to original site conditions. Sampling was performed in general accordance with DEP-SOP-001/01. The soil boring locations are illustrated on the Site Map/Sample Location Plan in **Figure 2**. A summary of the OVM measurement data is presented on the Soil Boring Logs in **Appendix A**.

### 3.2 Site Lithology

The lithologic sequences beneath the subject property were evaluated as part of this assessment. The classifications and descriptions indicated are based on visual and manual characterizations of the recovered soil samples. The general soil profile consists of topsoil and grass (SB-1 and SB-2) or 57 stone (SB-3) ranging in depth from land surface to approximately three inches bls. Brown fine sand continued to a depth of approximately three feet bls. A petroleum odor was noted in soil boring SB-3 from a depth of one to four feet bls. Saturated conditions were encountered at a depth of approximately four feet bls in the soil borings.

### 4.0 GROUNDWATER QUALITY ASSESSMENT

Groundwater conditions were not explored, as this was outside the scope of this assessment.

#### 5.0 ADDITIONAL SERVICES

No other services were performed as part of this Limited Phase II ESA.

#### UES Project No. 0940.2400115.0000 UES Report No. 2093292 June 27, 2024

## 6.0 QUALITY ASSURANCE/QUALITY CONTROL

This section summarizes the QA/QC procedures followed during this assessment. Laboratory sample analytical reports are presented in **Appendix B**. A NELAP-accredited laboratory, Eurofins, performed the soil sample analyses. The analytical data provided by the laboratory were reviewed for laboratory precision, accuracy, and completeness. The soil sample laboratory data provided by Eurofins was deemed acceptable based on the following information:

- Samples were received on ice and the cooler temperature was within the acceptable temperature range of  $0-6^{\circ}$  Celsius.
- Samples were prepared and analyzed within hold time.
- Laboratory control samples (surrogate, blanks, blank spikes, and blank spike duplicates) recoveries were within control limits.

Based on these results, the samples collected at the site on June 6, 2024 are an accurate representation of site soil quality conditions.

#### 7.0 FINDINGS

#### 7.1 Soil Assessment Results

A review of the soil laboratory analytical reports documented concentrations of the following compounds above the direct exposure SCTLs as defined in Chapter 62-777, F.A.C.:

 Soil sample SB-3 – TRPH was detected at a concentration of 490 mg/kg, exceeding its residential SCTL of 460 mg/kg and its leachability SCTL of 340 mg/kg.

Further laboratory analysis appeared warranted since the FLPRO method targets the detection of aromatic hydrocarbons in a carbon chain range of C<sub>8</sub>-C<sub>40</sub>. The C<sub>8</sub>-C<sub>40</sub> range of carbon chain can be subclassified, with each class possessing its own calculated SCTL. Given the potential for the sub-classification methodology to yield relatively high SCTLs, it is possible to demonstrate that a detected concentration of TRPH meets the cleanup target level, even though it exceeds that level set by Chapter 62-777, FAC. Since TRPH is the only contaminant of concern detected above the SCTL, the laboratory was instructed to "speciate" the TRPH analysis for SB-3 by the TPHCWG method. The reported concentrations were compared to the calculated SCTL for the TRPH fraction (Chapter 62-777, F.A.C.). According to the speciation analysis, all of the detected concentrations were below their respective SCTLs.

Site concentrations for specific PAHs were converted to BaP equivalents before comparison with the applicable SCTLs utilizing the Benzo(a)pyrene Conversion Table. Each of these concentrations was converted to BaP equivalents, which calculates the equivalent concentrations, then adds them up and compares the total to the applicable BaP direct exposure SCTL. The calculated equivalent concentration (the sum of the product of selective PAH concentrations and their respective Toxic Equivalency Factor) in the soil samples collected from soil borings SB-1 and SB-3 were calculated at concentrations below the established direct exposure residential SCTL of 0.1 mg/kg.

UES Project No. 0940.2400115.0000 UES Report No. 2093292 June 27, 2024

The remainder of the tested constituents were documented below their respective direct exposure residential and commercial/industrial SCTLs as defined in Chapter 62-777, F.A.C. and/or the laboratory MDLs.

The soil analytical data is expressed in tabular format in **Table 1**. The results for the TRPH speciation are also summarized in **Table 1**. The soil laboratory analytical report and associated chain-of-custody documentation are presented in **Appendix B**. Copies of the Benzo(a)pyrene Conversion Tables are presented in **Appendix C**.

#### 8.0 CONCLUSIONS & RECOMMENDATIONS

#### 8.1 Conclusions

A Limited Phase II ESA was performed at the State Road 16 Parcel, located at 1974 State Road 16 in St. Augustine, St. Johns County, Florida. The purpose of this Limited Phase II ESA was to conduct a limited subsurface evaluation for evidence of potential subsurface impacts at the subject property from RECs and VIC, as identified in the Phase I ESA performed by UES, dated May 29, 2024.

Based on the soil analytical data collected during this Limited Phase II ESA, contaminated soil is not present in the unsaturated zone, as demonstrated by the analyses of soil samples collected from the representative sampling locations.

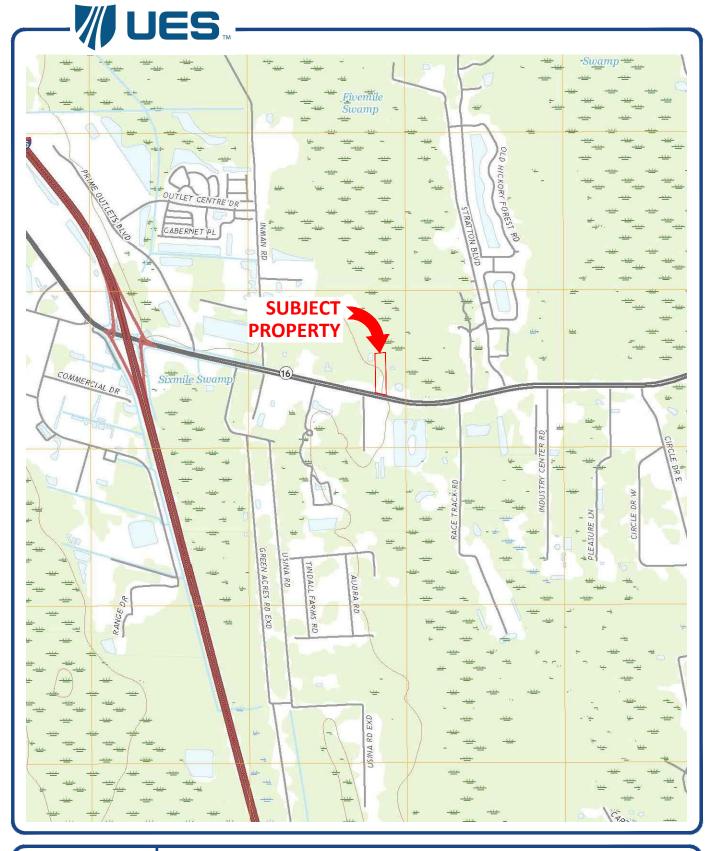
#### 8.2 Recommendations

Based on the results of this Limited Phase II ESA report, additional assessment does not appear warranted at this time.

# **FIGURES**



Grounded in Excellence





PHASE II ESA
STATE ROAD 16 PARCEL
1974 STATE ROAD 16
ST. AUGUSTINE, ST. JOHNS COUNTY, FLORIDA

## **USGS SITE LOCATION MAP**

DRAWN BY:	T. WEBB	DATE: 6/13/24	CHECKED BY:	T. BORCHERT	DATE:	6/13/24
SCALE:	1:24,000	PROJECT NO. 0940.2400115.0000	REPORT NO.	2093292	FIGURE NO.	1





LEGEND

SOIL SAMPLE LOCATION



PHASE II ESA
STATE ROAD 16 PARCEL
1974 STATE ROAD 16
ST. AUGUSTINE, ST. JOHNS COUNTY, FLORIDA

## **SAMPLE LOCATION MAP**

DRAWN BY: T. WEBB	6/13/24	CHECKED BY:	T. BORCHERT	DATE: 6/13/24
SCALE: 1" = 160'	PROJECT NO. 0940.2400115.0000	REPORT NO.	2093292	FIGURE NO. 2

# **TABLES**



Grounded in Excellence



## **Table 1: Summary of Soil Analytes**

Undeveloped State Road 16 Assessment 1974 State Road 16

St. Augustine, St. Johns County, Florida 32084

		Residential	Commercial/	Leachability	Sample Identification	n and Collection Date
Ana	lyte	SCTL	Industrial SCTL	SCTL	SB-1	SB-3
					6/6/2024	6/6/2024
	zene	1.2	1.7	0.007	0.00064 U	0.032 U
Ethy	ylbenzene	1500	9200	0.6	0.00074 U	0.037 U
Met	hyl tert-butyl ether	4400	24000	0.09	0.00080 U	0.040 U
Tolu	uene	7500	60000	0.5	0.0038 U	0.19 U
Xyle	enes, Total	130	700	0.2	0.0014 U	‡0.21 l
1-M	lethylnaphthalene	200	1800	3.1	0.00096 U	0.013
2-M	lethylnaphthalene	210	2100	8.5	0.0013 U	0.021
Ace	naphthene	2400	20000	2.1	0.00081 U	0.0057
Ace	naphthylene	1800	20000	27	0.0016 U	0.0015 I
Ant	hracene	21000	300000	2500	0.0014 U	0.0029 I
Ben	zo[a]anthracene	#	#	0.8	0.0078 U	0.0071 U
Ben	zo[a]pyrene	0.1	0.7	8	0.0016 U	0.0051
Ben	zo[a]pyrene Equivalents	0.1	0.7	8	0.00326	0.0076
Ben	zo[b]fluoranthene	#	#	2.4	0.0050 I	0.0050 I
Ben	zo[g,h,i]perylene	2500	52000	32000	0.0048	0.0025 U
Ben	zo[k]fluoranthene	#	#	24	0.0021 U	0.0021
Chr	ysene	#	#	77	0.0097 U	0.0088 U
Dib	enz(a,h)anthracene	#	#	0.7	0.0028 U	0.0026 U
Fluc	oranthene	3200	59000	1200	0.0031 l	0.0052
Fluc	orene	2600	33000	160	0.00086 U	0.0062
Inde	eno[1,2,3-cd]pyrene	#	#	6.6	0.0029 U	0.0031 l
Nap	hthalene	55	300	1.2	0.0011 U	0.0093
	nanthrene	2200	36000	250	0.0012 I	0.0048
Pyre	ene	2400	45000	880	0.0051 U	0.0093 I
TRP		460	2700	340	78	490
	Over C10-C12 aliphatics	1700	10000	51000		28 U
	Over C10-C12 aromatics	900	5900	520		28 U
	Over C12-C16 aliphatics	2900	21000			28 U
ts	Over C12-C16 aromatics	1500	12000	1000		28 U
Result	Over C16-C21 aromatics	1300	11000	3200		28 U
n R	Over C16-C35 aliphatics	42000	280000			450
iatic	Over C21-C35 aromatics	2300	40000	25000		28 U
Speciation	Over C5-C6 aliphatics	6200	33000	470		28 U
RPH S	Over C5-C7 aromatics	340	1800	34		23 U
품	Over C6-C8 aliphatics	8700	46000	1300		28 U
	Over C7-C8 aromatics	490	3700	59		28 U
	Over C8-C10 aliphatics	850	4800	7000		28 U
	Over C8-C10 aromatics	460	2700	340		28 U

#### **Table Notes and Definitions**

Results are reported in milligrams per kilogram (mg/Kg)

SCTL - Soil Cleanup Target Levels, Table II, Chapter 62-777, F.A.C.

Blank Cell - Analysis not requested for this analyte or No Cleanup Target Level

Results exceed the Direct Exposure Residential SCTL

Results exceed the Direct Exposure Commercial/Industrial SCTL

Results exceed Leachability based on Groundwater Criteria

Results exceeding an established SCTL are expressed in Boldface Type

- \* Contaminant is not a health concern for this exposure scenario.
- \*\* Direct exposure value based on acute toxicity considerations. This criterion is applicable in scenarios where children might be exposed to soils (e.g. residences, schools, playgrounds)
- \*\*\* Leachability values may be derived using the SPLP Test to
- # = Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene, using the approach described in the February 2005 'Final Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, F.A.C.'

‡This value rounded down to one significant number per FDEP's "Rounding Analytica, Data for Site Rehabilitation Completion," dated November 17, 2011

#### **Laboratory Qualifiers**

- U Indicates the compound was analyzed for but not detected above the method detection limit
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
- J The value is outside laboratory established criteria
- V Indicates the analyte was detected in both the sample and method blank

# **APPENDIX A**



Grounded in Excellence



## **BORING LOG**

Boring/We	Il Number:		Permit Number: N/A					FDEP Facility Identification Number: N/A					
Site Name:				Borehole Star	t Date:	6/6/24	Borehole	Start Time:	13	00	☐ A.M.	P.M.	
State Road	16 Phase II	ESA		En	d Date:	6/6/24		End Time	1335		☐ A.M.	P.M.	
Environme	ntal Contrac	tor:			Geologist's Name:			Environmental Technician's Name:					
UES				T. Borchert					ap he	re to ente			
Drilling Cor UES	mpany:		Pavemei N/A	nt Thickness (i	ole Diamete	er (inches):		Borehole	Depth (fee	t):			
Drilling Me				t Borehole (D	ured Well D	TW (in feet	after		model and	type):			
Hand Aug	er		from soi	l moisture):	NA	water	rechargers	in well): N	T	WIIIIKAE	3000 / PID		
		tings (check m od or multiple		e checked:	☐ Drur	n □S	pread 🛭	Backfill	□ Sto	ockpile	☐ Other		
	ompletion (	check one): ods or multiple	e items a	re checked:	☐ Well	☐ Gr	out 🗆 B	entonite	⊠ Ba	ckfill [	Other		
	PID							USCS	Mois		Soil and Greamples (list	oundwater	
Sample Type	Reading (PPM)	Depth (feet)			ple Descrip			Symbol	Cont		imber and screen int	depth or	
HA	O	0.5		Gras rown	5		2		1	>			
	0	1	B	rown.	Fine.	Sand			1				
	0	2							C				
V	0	3		0					1				
		4											
		5											
		6											
		7											
		8											
		9											
		10											
		11											
		12											
		13							-				
		14							-				
		15							-				
		16											
		17											
		18											
		19 20											
		20											
		22											
	_	23											
		24											
		25											
									1				



## **BORING LOG**

Borin	g/We	Number:			Permit Nun	nber:				FDEP Facili N/A	ty Iden	tificatio	on Number:	
Site N	lame	:			Borehole Star	t Date:	6/	6/24	Borehole :	Start Time:	13	2 -	) \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1. XP.M.
		16 Phase II	ESA			d Date:		6/24		End Time 1345 A.M. XP.I				
Enviro	onme	ental Contrac	tor:		Geologist's T. Borcher								ian's Name: enter text.	
				(4)										
Drillin UES	ig Co	mpany:		Pavemei N/A	nt Thickness (ir	nches):		Boreho 3.25	le Diamete	r (inches):		Boreho	ole Depth (fe	eet):
Drillin	ng Me	ethods:		Apparen	t Borehole (DT	W) (in fe	eet	Measu	red Well D	W (in feet	after		ist model an	
Hand				from soi	I moisture):	VA	•	water i	echargers	in well): N	14	MiniR	AE 3000 / PII	D 
			tings (check m od or multiple		e checked:	□ Di	rum	□ Sp	read 🛚	Backfill	☐ Sto	ockpile	e □ Othe	r
1		Completion (		o itams a	ro chockodi	□w	'ell	□ Gro	ut 🗆 B	entonite	⊠ Ba	ckfill	☐ Other	
Describe if other methods or multiple items are checked:  Lab Soil and Groundwate										iroundw <u>ater</u>				
Lab Soil and Groundwater  Sample PID Depth USCS Moisture Samples (list sample Type (PPM) Sample Description Symbol Content number and depth or screen interval)														
H	A	0	0.5		Brown	FIN	2_	san	1		D			
		0	1								D			
		0	2								5			
		0	3			/					N			
		-	4											
			5											
			6											
			7											
			8											
			9											
			10											
			11											
			12								-			
			13											
			14											
_			15								-			
_	_		16 17											
	_		18											
			19											
			20											
			21											
			22		=======================================									
			23											
			24											
			25											



## **BORING LOG**

Boring/We	ell Number:	3		Permit N N/A	lumber:				FDEP Facili	ty Iden	tifica	tion Nu	ımber:	
Site Name				Borehole S	tart Date	6/	6/24	Borehole	Start Time:	13	18		☐ A.M.	P.M.
State Road	16 Phase II	ESA			End Date	6/	6/24		End Time	13	57	5	☐ A.M.	P.M.
Environme UES	ental Contrac	tor:		Geologis T. Borch	t's Name nert	:			Environm Click or t					
Drilling Co	mpany:		Pavemei	nt Thickness	(inches)		Boreh	ole Diamete	er (inches):		Bore	ehole D	epth (fee	t):
UES			N/A				3.25						4	
Drilling Me				t Borehole (		feet	Measu	red Well D	ΓW (in feet a	after			odel and 000 / PID	type):
Hand Aug	ger		from soi	l moisture):	4		water	recnargers	in well): N	H	IVIIII	INAL 30	00 / FID	
		tings (check m od or multiple		e checked:		Drum	□ Sp	oread 🗵	Backfill	□ Sto	ockpi		☐ Other	
	Completion (				·	Well	□ Gro	out 🗆 B	entonite	⊠ Ba	ckfil		Other	
Describe if	f other meth	ods or multipl	e items a	re checked:			_					Lab So	il and Gr	oundwater
Sample Type	PID Reading (PPM)	Depth (feet)		Sa	mple Des	scriptio	n		USCS Symbol	Mois Cont		San num	n <mark>ples</mark> (list	sample depth or
HA	MA	0.5		57	Ston	e				D				
	262	1	DE	brown	fire		and il	setro		1				
	3 99	2						•		D		Sam	DLE	1350
	27	3								1	1			
	NIA	4			V					5				
V		5												
		6												
		7												
		8												
		9												
		10												
		11												
		12												
		13												
		14												
		15												
		16												
		17												
		18												
		19												
		20												
		21												
		22												
		23									_			
		24												
		25												

# **APPENDIX B**



Grounded in Excellence

12

14

## **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Mr. Thomas M. Borchert Universal Engineering Sciences Inc 5561 Florida Mining Boulevard, South Jacksonville, Florida 32257

Generated 6/25/2024 3:07:23 PM Revision 1

## **JOB DESCRIPTION**

1974 SR 16

## **JOB NUMBER**

670-41208-1

Eurofins Orlando 481 Newburyport Avenue Altamonte Springs FL 32701



## **Eurofins Orlando**

## **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

## **Authorization**

Generated 6/25/2024 3:07:23 PM Revision 1

Authorized for release by Kathryn Nordmark, Senior Project Manager kathryn.nordmark@et.eurofinsus.com (407)773-2123 3

4

5

6

0

4.0

11

12

13

15

Client: Universal Engineering Sciences Inc Project/Site: 1974 SR 16 Laboratory Job ID: 670-41208-1

## **Table of Contents**

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Detection Summary	6
Client Sample Results	7
Surrogate Summary	10
QC Sample Results	11
QC Association Summary	17
Lab Chronicle	19
Certification Summary	20
Method Summary	21
Sample Summary	22
Chain of Custody	23
Receipt Checklists	26

5

0

8

10

12

13

## **Definitions/Glossary**

Client: Universal Engineering Sciences Inc

Job ID: 670-41208-1 Project/Site: 1974 SR 16

**Qualifiers** 

**GC/MS VOA** 

Qualifier **Qualifier Description** 

The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

Indicates that the compound was analyzed for but not detected. U

**GC/MS Semi VOA** 

Qualifier **Qualifier Description** 

The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U Indicates that the compound was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

Indicates that the compound was analyzed for but not detected.

**Glossary** 

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery CFL Contains Free Liquid **CFU** Colony Forming Unit **CNF** Contains No Free Liquid

**DER** Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor** 

Detection Limit (DoD/DOE) DL

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

**EDL** Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) Minimum Detectable Concentration (Radiochemistry) MDC

MDL Method Detection Limit Minimum Level (Dioxin) ML MPN Most Probable Number MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

**PQL Practical Quantitation Limit** 

**PRES** Presumptive **Quality Control** QC

**RER** Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

**RPD** Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) **TEQ** Toxicity Equivalent Quotient (Dioxin)

**TNTC** Too Numerous To Count

### **Case Narrative**

Client: Universal Engineering Sciences Inc

Project: 1974 SR 16

Job ID: 670-41208-1

**Eurofins Orlando** 

Job ID: 670-41208-1

Job Narrative 670-41208-1

#### Revision

The report being provided is a revision of the original report sent on 6/17/2024. The report (revision 1) is being revised due to: Per client, TRPH speciation required for SB3.

#### Receipt

The samples were received on 6/7/2024 7:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.9° C.

#### GC/MS VOA

Method 8260D: The following sample was diluted due to the nature of the sample matrix: SB-3 (670-41208-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method 8270E SIM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 670-95277 and analytical batch 670-95560 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### **Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Eurofins Orlando

2

3

5

6

0

11

14

1

## **Detection Summary**

Client: Universal Engineering Sciences Inc

Project/Site: 1974 SR 16

**Client Sample ID: SB-1** 

Lab Sample ID: 670-41208-1

Analyte	Result Q	ualifier PC	QL MDL	Unit	Dil Fac I	D Method	Prep Type
Benzo[b]fluoranthene	0.0050 I	0.0	0.0049	mg/Kg	1 3	8270E SIM	Total/NA
Benzo[g,h,i]perylene	0.0048	0.00	41 0.0028	mg/Kg	1 →	≨ 8270E SIM	Total/NA
Fluoranthene	0.0031 I	0.00	11 0.0021	mg/Kg	1 ⊰	≨ 8270E SIM	Total/NA
Phenanthrene	0.0012 I	0.00	11 0.0010	mg/Kg	1 ⊰	≨ 8270E SIM	Total/NA
Total Petroleum Hydrocarbons (C8-C40)	78		52 26	mg/Kg	1 ⊰	FL-PRO	Total/NA

#### Lab Sample ID: 670-41208-2 **Client Sample ID: SB-3**

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total - DL	0.21	Ī	1.3	0.070	mg/Kg	50	₩	8260D	Total/NA
m-Xylene & p-Xylene - DL	0.098	I	1.3	0.070	mg/Kg	50	₩	8260D	Total/NA
o-Xylene - DL	0.11	I	1.3	0.036	mg/Kg	50	₩	8260D	Total/NA
1-Methylnaphthalene	0.013		0.0038	0.00087	mg/Kg	1	₩	8270E SIM	Total/NA
2-Methylnaphthalene	0.021		0.0038	0.0012	mg/Kg	1	₩	8270E SIM	Total/NA
Acenaphthene	0.0057		0.0038	0.00073	mg/Kg	1	₩	8270E SIM	Total/NA
Acenaphthylene	0.0015	1	0.0038	0.0014	mg/Kg	1	₩	8270E SIM	Total/NA
Anthracene	0.0029	I	0.0038	0.0013	mg/Kg	1	₩	8270E SIM	Total/NA
Benzo[a]pyrene	0.0051		0.0038	0.0014	mg/Kg	1	₩	8270E SIM	Total/NA
Benzo[b]fluoranthene	0.0050	I	0.011	0.0044	mg/Kg	1	₩	8270E SIM	Total/NA
Benzo[k]fluoranthene	0.0021	I	0.0038	0.0019	mg/Kg	1	₩	8270E SIM	Total/NA
Fluoranthene	0.0052		0.0038	0.0019	mg/Kg	1	₩	8270E SIM	Total/NA
Fluorene	0.0062		0.0038	0.00078	mg/Kg	1	₩	8270E SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.0031	I	0.0038	0.0026	mg/Kg	1	₩	8270E SIM	Total/NA
Naphthalene	0.0093		0.0038	0.00099	mg/Kg	1	₩	8270E SIM	Total/NA
Phenanthrene	0.0048		0.0038	0.00090	mg/Kg	1	₩	8270E SIM	Total/NA
Pyrene	0.0093	I	0.011	0.0046	mg/Kg	1	₩	8270E SIM	Total/NA
Total Petroleum Hydrocarbons (C8-C40)	490		47	23	mg/Kg	1	₩	FL-PRO	Total/NA
Over C16-C35 aliphatics	450		56	28	mg/Kg	1	₩	TPHCWG	Total/NA

Job ID: 670-41208-1

## **Client Sample Results**

Client: Universal Engineering Sciences Inc

Project/Site: 1974 SR 16

Client Sample ID: SB-1 Lab Sample ID: 670-41208-1

Date Collected: 06/06/24 13:35

Date Received: 06/07/24 07:30

Matrix: Solid
Percent Solids: 80.1

Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/M	S					
Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00064	U	0.015	0.00064	mg/Kg	<u></u>	06/07/24 12:29	06/11/24 18:34	1
Ethylbenzene	0.00074	U	0.015	0.00074	mg/Kg	☼	06/07/24 12:29	06/11/24 18:34	1
Toluene	0.0038	U	0.015	0.0038	mg/Kg	☼	06/07/24 12:29	06/11/24 18:34	1
Xylenes, Total	0.0014	U	0.025	0.0014	mg/Kg	₩	06/07/24 12:29	06/11/24 18:34	1
m-Xylene & p-Xylene	0.0014	U	0.025	0.0014	mg/Kg	☼	06/07/24 12:29	06/11/24 18:34	1
o-Xylene	0.00071	U	0.025	0.00071	mg/Kg	₩	06/07/24 12:29	06/11/24 18:34	1
Methyl tert-butyl ether	0.00080	U	0.015	0.00080	mg/Kg	☼	06/07/24 12:29	06/11/24 18:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130				06/07/24 12:29	06/11/24 18:34	1
4-Bromofluorobenzene (Surr)	112		70 - 130				06/07/24 12:29	06/11/24 18:34	1
Dibromofluoromethane (Surr)	120		70 - 130				06/07/24 12:29	06/11/24 18:34	1

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	0.00096	U	0.0041	0.00096	mg/Kg	<u></u>	06/12/24 06:15	06/13/24 18:07	1
2-Methylnaphthalene	0.0013	U	0.0041	0.0013	mg/Kg	₽	06/12/24 06:15	06/13/24 18:07	1
Acenaphthene	0.00081	U	0.0041	0.00081	mg/Kg	₩	06/12/24 06:15	06/13/24 18:07	1
Acenaphthylene	0.0016	U	0.0041	0.0016	mg/Kg	⊅	06/12/24 06:15	06/13/24 18:07	1
Anthracene	0.0014	U	0.0041	0.0014	mg/Kg	₽	06/12/24 06:15	06/13/24 18:07	1
Benzo[a]anthracene	0.0078	U	0.012	0.0078	mg/Kg	≎	06/12/24 06:15	06/13/24 18:07	1
Benzo[a]pyrene	0.0016	U	0.0041	0.0016	mg/Kg	₽	06/12/24 06:15	06/13/24 18:07	1
Benzo[b]fluoranthene	0.0050	1	0.012	0.0049	mg/Kg	≎	06/12/24 06:15	06/13/24 18:07	1
Benzo[g,h,i]perylene	0.0048		0.0041	0.0028	mg/Kg	≎	06/12/24 06:15	06/13/24 18:07	1
Benzo[k]fluoranthene	0.0021	U	0.0041	0.0021	mg/Kg	₽	06/12/24 06:15	06/13/24 18:07	1
Chrysene	0.0097	U	0.012	0.0097	mg/Kg	☼	06/12/24 06:15	06/13/24 18:07	1
Dibenz(a,h)anthracene	0.0028	U	0.0041	0.0028	mg/Kg	₽	06/12/24 06:15	06/13/24 18:07	1
Fluoranthene	0.0031	1	0.0041	0.0021	mg/Kg	₽	06/12/24 06:15	06/13/24 18:07	1
Fluorene	0.00086	U	0.0041	0.00086	mg/Kg	☼	06/12/24 06:15	06/13/24 18:07	1
Indeno[1,2,3-cd]pyrene	0.0029	U	0.0041	0.0029	mg/Kg	≎	06/12/24 06:15	06/13/24 18:07	1
Naphthalene	0.0011	U	0.0041	0.0011	mg/Kg	₽	06/12/24 06:15	06/13/24 18:07	1
Phenanthrene	0.0012	1	0.0041	0.0010	mg/Kg	☼	06/12/24 06:15	06/13/24 18:07	1
Pyrene	0.0051	U	0.012	0.0051	mg/Kg	₩	06/12/24 06:15	06/13/24 18:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-methylnaphthalene-d10	64		27 - 148				06/12/24 06:15	06/13/24 18:07	1
Fluoranthene-d10 (Surr)	81		37 - 150				06/12/24 06:15	06/13/24 18:07	1

Method: FL-DEP FL-PRO - FI	lorida - Petro	leum Rang	ge Organics (	GC)					
Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (C8-C40)	78		52	26	mg/Kg	<u> </u>	06/10/24 09:30	06/10/24 22:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	83		66 - 136				06/10/24 09:30	06/10/24 22:26	1
C35 (Surr)	85		36 - 132				06/10/24 09:30	06/10/24 22:26	1

**Eurofins Orlando** 

Job ID: 670-41208-1

## **Client Sample Results**

Client: Universal Engineering Sciences Inc

Project/Site: 1974 SR 16

**Client Sample ID: SB-3** Lab Sample ID: 670-41208-2

Date Collected: 06/06/24 13:50 **Matrix: Solid** Percent Solids: 88.4 Date Received: 06/07/24 07:30

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.032	U	0.76	0.032	mg/Kg	<u></u>	06/07/24 12:29	06/11/24 18:55	50
Ethylbenzene	0.037	U	0.76	0.037	mg/Kg	☼	06/07/24 12:29	06/11/24 18:55	50
Toluene	0.19	U	0.76	0.19	mg/Kg	☼	06/07/24 12:29	06/11/24 18:55	50
Xylenes, Total	0.21	I	1.3	0.070	mg/Kg	☼	06/07/24 12:29	06/11/24 18:55	50
m-Xylene & p-Xylene	0.098	I	1.3	0.070	mg/Kg	☼	06/07/24 12:29	06/11/24 18:55	50
o-Xylene	0.11	I	1.3	0.036	mg/Kg	₩	06/07/24 12:29	06/11/24 18:55	50
Methyl tert-butyl ether	0.040	U	0.76	0.040	mg/Kg	☼	06/07/24 12:29	06/11/24 18:55	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		70 - 130				06/07/24 12:29	06/11/24 18:55	50
` /	, 00		70-700				00/01/24 12.23	00/11/24 10.00	00
4-Bromofluorobenzene (Surr)	98		70 - 130				06/07/24 12:29		50
` '									
4-Bromofluorobenzene (Surr)	98 112	Organic C	70 - 130 70 - 130	(GC/MS	SIM)		06/07/24 12:29	06/11/24 18:55	50
4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	98 112 - Semivolatile	Organic O	70 - 130 70 - 130	•	SIM) Unit	D	06/07/24 12:29	06/11/24 18:55	50
4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Method: SW846 8270E SIM	98 112 - Semivolatile	_	70 - 130 70 - 130 Compounds	•	•	<u> </u>	06/07/24 12:29 06/07/24 12:29	06/11/24 18:55 06/11/24 18:55	50 50
4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)  Method: SW846 8270E SIM Analyte	98 112 - Semivolatile Result	_	70 - 130 70 - 130 Compounds PQL	MDL	Unit mg/Kg		06/07/24 12:29 06/07/24 12:29 Prepared	06/11/24 18:55 06/11/24 18:55 Analyzed	50 50

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	0.013		0.0038	0.00087	mg/Kg	— <del>-</del>	06/12/24 06:15	06/13/24 18:30	1
2-Methylnaphthalene	0.021		0.0038	0.0012	mg/Kg	₽	06/12/24 06:15	06/13/24 18:30	1
Acenaphthene	0.0057		0.0038	0.00073	mg/Kg	≎	06/12/24 06:15	06/13/24 18:30	1
Acenaphthylene	0.0015	I	0.0038	0.0014	mg/Kg	₽	06/12/24 06:15	06/13/24 18:30	1
Anthracene	0.0029	I	0.0038	0.0013	mg/Kg	₽	06/12/24 06:15	06/13/24 18:30	1
Benzo[a]anthracene	0.0071	U	0.011	0.0071	mg/Kg	₽	06/12/24 06:15	06/13/24 18:30	1
Benzo[a]pyrene	0.0051		0.0038	0.0014	mg/Kg	₽	06/12/24 06:15	06/13/24 18:30	1
Benzo[b]fluoranthene	0.0050	1	0.011	0.0044	mg/Kg	₩	06/12/24 06:15	06/13/24 18:30	1
Benzo[g,h,i]perylene	0.0025	U	0.0038	0.0025	mg/Kg	☼	06/12/24 06:15	06/13/24 18:30	1
Benzo[k]fluoranthene	0.0021	I	0.0038	0.0019	mg/Kg	₽	06/12/24 06:15	06/13/24 18:30	1
Chrysene	0.0088	U	0.011	0.0088	mg/Kg	₩	06/12/24 06:15	06/13/24 18:30	1
Dibenz(a,h)anthracene	0.0026	U	0.0038	0.0026	mg/Kg	☼	06/12/24 06:15	06/13/24 18:30	1
Fluoranthene	0.0052		0.0038	0.0019	mg/Kg	₩	06/12/24 06:15	06/13/24 18:30	1
Fluorene	0.0062		0.0038	0.00078	mg/Kg	₩	06/12/24 06:15	06/13/24 18:30	1
Indeno[1,2,3-cd]pyrene	0.0031	I	0.0038	0.0026	mg/Kg	☼	06/12/24 06:15	06/13/24 18:30	1
Naphthalene	0.0093		0.0038	0.00099	mg/Kg	₩	06/12/24 06:15	06/13/24 18:30	1
Phenanthrene	0.0048		0.0038	0.00090	mg/Kg	₩	06/12/24 06:15	06/13/24 18:30	1
Pyrene	0.0093	I	0.011	0.0046	mg/Kg	₩	06/12/24 06:15	06/13/24 18:30	1
0	0/5		1 5 54				D	A 1	

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-methylnaphthalene-d10	45		27 - 148	06/12/24 06:15	06/13/24 18:30	1
Fluoranthene-d10 (Surr)	77		37 - 150	06/12/24 06:15	06/13/24 18:30	1

Method: FL-DEP FL-PRO - Florida	- Petroleum Range	Organics	(GC)
Analyta	Popult Qualifier	DOL	RA.

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (C8-C40)	490		47	23	mg/Kg	<del></del>	06/10/24 09:30	06/10/24 22:44	1

	Surrogate	%Recovery	Qualifier	Limits	Prepared Analyzed	Dil Fac
	o- terphenyl (Surr)	94		66 - 136	06/10/24 09:30 06/10/24 22:44	1
l	C35 (Surr)	81		36 - 132	06/10/24 09:30 06/10/24 22:44	1

Method: TPH	<b>CWG TPHCWG</b>	- TPH Criteria	Working (	Group (	(CWG)	Fractionation
method: II II			a ttorking v	oloup (	(0110)	i iuotionution

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Over C5-C6 aliphatics	28	U	56	28	mg/Kg	<u></u>	06/19/24 11:31	06/21/24 14:12	1
Over C6-C8 aliphatics	28	U	56	28	mg/Kg	₩	06/19/24 11:31	06/21/24 14:12	1

**Eurofins Orlando** 

Job ID: 670-41208-1

## **Client Sample Results**

Client: Universal Engineering Sciences Inc Job ID: 670-41208-1

Project/Site: 1974 SR 16

Client Sample ID: SB-3 Lab Sample ID: 670-41208-2

Jale Received. 00/07/24 07.30						Percent Son	us. 0
<b>Method: TPH CWG TPHCWG -</b>	<b>TPH Criteria Working (</b>	Group (CWG)	Fractionation	(Conti	nued)		
	D 11 0 110			-			

rte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C8-C10 aliphatics	28	U	56	28	mg/Kg	<u></u>	06/19/24 11:31	06/21/24 14:12	1
C10-C12 aliphatics	28	U	56	28	mg/Kg	₩	06/19/24 11:31	06/21/24 14:12	1
C12-C16 aliphatics	28	U	56	28	mg/Kg	☆	06/19/24 11:31	06/21/24 14:12	1
C16-C35 aliphatics	450		56	28	mg/Kg	☼	06/19/24 11:31	06/21/24 14:12	1
C5-C7 aromatics	23	U	23	23	mg/Kg	₩	06/19/24 11:31	06/21/24 17:01	1
C7-C8 aromatics	28	U	39	28	mg/Kg	☼	06/19/24 11:31	06/21/24 17:01	1
C8-C10 aromatics	28	U	56	28	mg/Kg	☼	06/19/24 11:31	06/21/24 17:01	1
C10-C12 aromatics	28	U	56	28	mg/Kg	₩	06/19/24 11:31	06/21/24 17:01	1
C12-C16 aromatics	28	U	56	28	mg/Kg	☼	06/19/24 11:31	06/21/24 17:01	1
C16-C21 aromatics	28	U	56	28	mg/Kg	☼	06/19/24 11:31	06/21/24 17:01	1
C21-C35 aromatics	28	U	56	28	ma/Ka	₩.	06/19/24 11:31	06/21/24 17:01	1
֡֡֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜	C8-C10 aliphatics C10-C12 aliphatics C12-C16 aliphatics C16-C35 aliphatics C5-C7 aromatics C7-C8 aromatics C8-C10 aromatics C10-C12 aromatics C12-C16 aromatics C16-C21 aromatics	C8-C10 aliphatics       28         C10-C12 aliphatics       28         C12-C16 aliphatics       28         C16-C35 aliphatics       450         C5-C7 aromatics       23         C7-C8 aromatics       28         C8-C10 aromatics       28         C10-C12 aromatics       28         C12-C16 aromatics       28         C16-C21 aromatics       28         C16-C21 aromatics       28	C8-C10 aliphatics       28       U         C10-C12 aliphatics       28       U         C12-C16 aliphatics       28       U         C16-C35 aliphatics       450         C5-C7 aromatics       23       U         C7-C8 aromatics       28       U         C8-C10 aromatics       28       U         C10-C12 aromatics       28       U         C12-C16 aromatics       28       U         C16-C21 aromatics       28       U	C8-C10 aliphatics       28 U       56         C10-C12 aliphatics       28 U       56         C12-C16 aliphatics       28 U       56         C16-C35 aliphatics       450       56         C5-C7 aromatics       23 U       23         C7-C8 aromatics       28 U       39         C8-C10 aromatics       28 U       56         C10-C12 aromatics       28 U       56         C12-C16 aromatics       28 U       56         C16-C21 aromatics       28 U       56         C16-C21 aromatics       28 U       56	C8-C10 aliphatics       28       U       56       28         C10-C12 aliphatics       28       U       56       28         C12-C16 aliphatics       28       U       56       28         C16-C35 aliphatics       450       56       28         C5-C7 aromatics       23       U       23       23         C7-C8 aromatics       28       U       39       28         C8-C10 aromatics       28       U       56       28         C10-C12 aromatics       28       U       56       28         C12-C16 aromatics       28       U       56       28         C16-C21 aromatics       28       U       56       28         C16-C21 aromatics       28       U       56       28	C8-C10 aliphatics       28       U       56       28       mg/Kg         C10-C12 aliphatics       28       U       56       28       mg/Kg         C12-C16 aliphatics       28       U       56       28       mg/Kg         C16-C35 aliphatics       450       56       28       mg/Kg         C5-C7 aromatics       23       U       23       23       mg/Kg         C7-C8 aromatics       28       U       39       28       mg/Kg         C8-C10 aromatics       28       U       56       28       mg/Kg         C10-C12 aromatics       28       U       56       28       mg/Kg         C12-C16 aromatics       28       U       56       28       mg/Kg         C16-C21 aromatics       28       U       56       28       mg/Kg	C8-C10 aliphatics       28       U       56       28       mg/Kg       \$\tilde{c}\$         C10-C12 aliphatics       28       U       56       28       mg/Kg       \$\tilde{c}\$         C12-C16 aliphatics       28       U       56       28       mg/Kg       \$\tilde{c}\$         C16-C35 aliphatics       450       56       28       mg/Kg       \$\tilde{c}\$         C5-C7 aromatics       23       U       23       23       mg/Kg       \$\tilde{c}\$         C7-C8 aromatics       28       U       39       28       mg/Kg       \$\tilde{c}\$         C8-C10 aromatics       28       U       56       28       mg/Kg       \$\tilde{c}\$         C10-C12 aromatics       28       U       56       28       mg/Kg       \$\tilde{c}\$         C12-C16 aromatics       28       U       56       28       mg/Kg       \$\tilde{c}\$         C16-C21 aromatics       28       U       56       28       mg/Kg       \$\tilde{c}\$	C8-C10 aliphatics       28       U       56       28       mg/Kg       © 06/19/24 11:31         C10-C12 aliphatics       28       U       56       28       mg/Kg       © 06/19/24 11:31         C12-C16 aliphatics       28       U       56       28       mg/Kg       © 06/19/24 11:31         C16-C35 aliphatics       450       56       28       mg/Kg       © 06/19/24 11:31         C5-C7 aromatics       23       U       23       23       mg/Kg       © 06/19/24 11:31         C7-C8 aromatics       28       U       39       28       mg/Kg       © 06/19/24 11:31         C8-C10 aromatics       28       U       56       28       mg/Kg       © 06/19/24 11:31         C10-C12 aromatics       28       U       56       28       mg/Kg       © 06/19/24 11:31         C12-C16 aromatics       28       U       56       28       mg/Kg       © 06/19/24 11:31         C16-C21 aromatics       28       U       56       28       mg/Kg       © 06/19/24 11:31	C8-C10 aliphatics       28       U       56       28       mg/Kg       © 06/19/24 11:31       06/21/24 14:12         C10-C12 aliphatics       28       U       56       28       mg/Kg       © 06/19/24 11:31       06/21/24 14:12         C12-C16 aliphatics       28       U       56       28       mg/Kg       © 06/19/24 11:31       06/21/24 14:12         C16-C35 aliphatics       450       56       28       mg/Kg       © 06/19/24 11:31       06/21/24 14:12         C5-C7 aromatics       23       U       23       23       mg/Kg       © 06/19/24 11:31       06/21/24 17:01         C7-C8 aromatics       28       U       39       28       mg/Kg       © 06/19/24 11:31       06/21/24 17:01         C8-C10 aromatics       28       U       56       28       mg/Kg       © 06/19/24 11:31       06/21/24 17:01         C10-C12 aromatics       28       U       56       28       mg/Kg       © 06/19/24 11:31       06/21/24 17:01         C12-C16 aromatics       28       U       56       28       mg/Kg       © 06/19/24 11:31       06/21/24 17:01         C16-C21 aromatics       28       U       56       28       mg/Kg       © 06/19/24 11:31       06/21/24 17:01

6

8

9

10

12

. .

15

Client: Universal Engineering Sciences Inc

Project/Site: 1974 SR 16

Job ID: 670-41208-1

## Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid Prep Type: Total/NA

			Pe	ercent Surro
		TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
670-41208-1	SB-1	99	112	120
670-41208-2 - DL	SB-3	103	98	112
LCS 670-95058/4	Lab Control Sample	114	102	98
LCSD 670-95058/5	Lab Control Sample Dup	109	105	103
MB 670-95058/8	Method Blank	99	106	112
Surrogate Legend				

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Solid Prep Type: Total/NA

			Percent	Surrogate Recovery (Acceptance Limits)
		2MN	FLN10	
Lab Sample ID	Client Sample ID	(27-148)	(37-150)	
670-41208-1	SB-1	64	81	
670-41208-2	SB-3	45	77	
LCS 670-95277/2-A	Lab Control Sample	41	91	
MB 670-95277/1-A	Method Blank	37	87	

Surrogate Legend

2MN = 2-methylnaphthalene-d10 FLN10 = Fluoranthene-d10 (Surr)

## Method: FL-PRO - Florida - Petroleum Range Organics (GC)

Matrix: Solid Prep Type: Total/NA

			Percent Sur	rogate Recovery (Acceptance Limits)
		OTP	C-35	
Lab Sample ID	Client Sample ID	(66-136)	(36-132)	
670-41208-1	SB-1	83	85	
670-41208-2	SB-3	94	81	
LCS 670-94850/2-A	Lab Control Sample	117	65	
MB 670-94850/1-A	Method Blank	88	51	

OTP = o- terphenyl (Surr)

C-35 = C35 (Surr)

Dil Fac

1

1

## Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 670-95058/8

**Matrix: Solid** 

Analyte

**Analysis Batch: 95058** 

Client Sa	mple ID: Method Blank	
	Prep Type: Total/NA	

Analyzed

 MB Result
 Qualifier
 PQL 0.00050
 MDL mg/Kg
 D mg/Kg

 0.00058
 U
 0.012
 0.00058
 mg/Kg

Benzene 06/11/24 13:04 Ethylbenzene 06/11/24 13:04 Toluene 0.0030 U 0.012 0.0030 mg/Kg 06/11/24 13:04 Xylenes, Total 0.0011 U 0.0011 mg/Kg 0.020 06/11/24 13:04 m-Xylene & p-Xylene 0.0011 U 0.020 0.0011 mg/Kg 06/11/24 13:04 o-Xylene 0.00056 U 0.020 0.00056 mg/Kg 06/11/24 13:04 0.012 Methyl tert-butyl ether 0.00063 U 0.00063 mg/Kg 06/11/24 13:04

MB MB

	III	IVID				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		06/11/24 13:04	1
4-Bromofluorobenzene (Surr)	106		70 - 130		06/11/24 13:04	1
Dibromofluoromethane (Surr)	112		70 - 130		06/11/24 13:04	1

Lab Sample ID: LCS 670-95058/4

**Matrix: Solid** 

**Analysis Batch: 95058** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

LCS LCS Spike %Rec Analyte Added Result Qualifier Limits Unit %Rec Benzene 0.0500 0.0497 99 49 - 152 mg/Kg Ethylbenzene 0.0500 0.0495 99 mg/Kg 54 - 139 Toluene 0.0500 0.0487 97 mg/Kg 55 - 136 Xylenes, Total 0.100 0.0958 mg/Kg 96 50 - 150 m-Xylene & p-Xylene 0.0500 0.0472 94 57 - 138 mg/Kg 97 o-Xylene 0.0500 0.0486 mg/Kg 56 - 133 Methyl tert-butyl ether 0.0500 0.0535 107 40 - 153 mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	114		70 - 130
4-Bromofluorobenzene (Surr)	102		70 - 130
Dibromofluoromethane (Surr)	98		70 - 130

Lab Sample ID: LCSD 670-95058/5

**Matrix: Solid** 

**Analysis Batch: 95058** 

Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

LCSD LCSD **RPD** Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 0.0500 Benzene 0.0482 96 49 - 152 19 mg/Kg 3 Ethylbenzene 0.0500 0.0471 54 - 139 mg/Kg 94 5 33 0.0500 Toluene 0.0417 mg/Kg 83 55 - 136 16 21 Xylenes, Total 0.100 0.0889 mg/Kg 89 50 - 150 7 30 m-Xylene & p-Xylene 0.0500 0.0453 91 57 - 138 31 mg/Kg o-Xylene 0.0500 0.0436 mg/Kg 87 56 - 133 29 0.0500 0.0553 111 40 - 153 42 Methyl tert-butyl ether mg/Kg

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	109		70 - 130
4-Bromofluorobenzene (Surr)	105		70 - 130

Project/Site: 1974 SR 16

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 670-95058/5 **Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA

**Matrix: Solid** 

**Analysis Batch: 95058** 

LCSD LCSD

%Recovery Qualifier Surrogate Limits Dibromofluoromethane (Surr) 103 70 - 130

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 670-95277/1-A

**Client Sample ID: Method Blank Prep Type: Total/NA** 

**Matrix: Solid Analysis Batch: 95560** Prep Batch: 95277

MB	MB							
Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.00077	U	0.0033	0.00077	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0011	U	0.0033	0.0011	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.00065	U	0.0033	0.00065	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0013	U	0.0033	0.0013	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0012	U	0.0033	0.0012	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0062	U	0.010	0.0062	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0013	U	0.0033	0.0013	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0039	U	0.010	0.0039	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0023	U	0.0033	0.0023	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0017	U	0.0033	0.0017	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0078	U	0.010	0.0078	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0023	U	0.0033	0.0023	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0017	U	0.0033	0.0017	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.00069	U	0.0033	0.00069	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0023	U	0.0033	0.0023	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.00088	U	0.0033	0.00088	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.00080	U	0.0033	0.00080	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
0.0041	U	0.010	0.0041	mg/Kg		06/12/24 06:15	06/13/24 11:47	1
	Result 0.00077 0.0011 0.00065 0.0013 0.0012 0.0062 0.0013 0.0039 0.0023 0.0017 0.0078 0.0023 0.0017 0.00069 0.0023 0.00088	MB Result Qualifier  0.00077  0.0011 U 0.00065 U 0.0013 U 0.0062 U 0.0013 U 0.0039 U 0.0023 U 0.0017 U 0.0078 U 0.0023 U 0.0017 U 0.00069 U 0.0023 U 0.00080 U 0.00080 U 0.00041 U	Result         Qualifier         PQL           0.00077         U         0.0033           0.0011         U         0.0033           0.00065         U         0.0033           0.0013         U         0.0033           0.0012         U         0.010           0.0013         U         0.010           0.0013         U         0.0033           0.0039         U         0.010           0.0023         U         0.0033           0.0017         U         0.0033           0.0078         U         0.0033           0.0017         U         0.0033           0.0017         U         0.0033           0.00069         U         0.0033           0.00088         U         0.0033           0.00080         U         0.0033	Result         Qualifier         PQL         MDL           0.00077         U         0.0033         0.00077           0.0011         U         0.0033         0.0011           0.00065         U         0.0033         0.00165           0.0013         U         0.0033         0.0013           0.0012         U         0.0033         0.0012           0.0062         U         0.010         0.0062           0.0013         U         0.010         0.0033           0.0039         U         0.010         0.0039           0.0023         U         0.0033         0.0023           0.0017         U         0.0033         0.0017           0.0023         U         0.0033         0.0023           0.0017         U         0.0033         0.0017           0.00069         U         0.0033         0.00069           0.0003         U         0.0033         0.0023           0.00088         U         0.0033         0.00088           0.00080         U         0.0033         0.00088	Result         Qualifier         PQL         MDL         Unit           0.00077         U         0.0033         0.00077         mg/Kg           0.0011         U         0.0033         0.0011         mg/Kg           0.00065         U         0.0033         0.00065         mg/Kg           0.0013         U         0.0033         0.0012         mg/Kg           0.0062         U         0.010         0.0062         mg/Kg           0.0013         U         0.0033         0.0013         mg/Kg           0.0039         U         0.010         0.0039         mg/Kg           0.0023         U         0.0033         0.0023         mg/Kg           0.0017         U         0.0033         0.0017         mg/Kg           0.0078         U         0.010         0.0078         mg/Kg           0.0023         U         0.0033         0.0023         mg/Kg           0.0017         U         0.0033         0.0017         mg/Kg           0.0023         U         0.0033         0.0017         mg/Kg           0.00069         U         0.0033         0.0023         mg/Kg           0.00088	Result         Qualifier         PQL         MDL unit         D           0.00077         U         0.0033         0.00077         mg/Kg           0.0011         U         0.0033         0.0011         mg/Kg           0.00065         U         0.0033         0.0013         mg/Kg           0.0013         U         0.0033         0.0012         mg/Kg           0.0062         U         0.010         0.0062         mg/Kg           0.0013         U         0.010         0.0062         mg/Kg           0.0013         U         0.010         0.0039         mg/Kg           0.0023         U         0.0033         0.0013         mg/Kg           0.0078         U         0.010         0.0078         mg/Kg           0.0078         U         0.0033         0.0023         mg/Kg           0.0017         U         0.0033         0.0017         mg/Kg           0.0017         U         0.0033         0.0017         mg/Kg           0.0017         U         0.0033         0.0017         mg/Kg           0.0003         U         0.0033         0.0017         mg/Kg           0.0003         U<	Result         Qualifier         PQL         MDL         Unit         D         Prepared           0.00077         U         0.0033         0.00077         mg/Kg         06/12/24 06:15           0.0011         U         0.0033         0.0011         mg/Kg         06/12/24 06:15           0.0013         U         0.0033         0.0013         mg/Kg         06/12/24 06:15           0.0012         U         0.0033         0.0012         mg/Kg         06/12/24 06:15           0.0062         U         0.010         0.0062         mg/Kg         06/12/24 06:15           0.0013         U         0.0033         0.0013         mg/Kg         06/12/24 06:15           0.0013         U         0.0033         0.0013         mg/Kg         06/12/24 06:15           0.0013         U         0.0033         0.0013         mg/Kg         06/12/24 06:15           0.0023         U         0.0033         0.0023         mg/Kg         06/12/24 06:15           0.0078         U         0.0033         0.0017         mg/Kg         06/12/24 06:15           0.0078         U         0.0033         0.0017         mg/Kg         06/12/24 06:15           0.0023         U <td>Result         Qualifier         PQL         MDL         Unit         D         Prepared         Analyzed           0.00077         U         0.0033         0.00077         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0011         U         0.0033         0.0011         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0013         U         0.0033         0.0013         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0012         U         0.0033         0.0012         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0012         U         0.0033         0.0012         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0062         U         0.010         0.0062         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0013         U         0.0033         0.0013         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0039         U         0.010         0.0039         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0023         U         0.0033         0.0023         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0078         U         0.</td>	Result         Qualifier         PQL         MDL         Unit         D         Prepared         Analyzed           0.00077         U         0.0033         0.00077         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0011         U         0.0033         0.0011         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0013         U         0.0033         0.0013         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0012         U         0.0033         0.0012         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0012         U         0.0033         0.0012         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0062         U         0.010         0.0062         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0013         U         0.0033         0.0013         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0039         U         0.010         0.0039         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0023         U         0.0033         0.0023         mg/kg         06/12/24 06:15         06/13/24 11:47           0.0078         U         0.

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed 2-methylnaphthalene-d10 37 27 - 148 06/12/24 06:15 06/13/24 11:47 Fluoranthene-d10 (Surr) 87 37 - 150 06/12/24 06:15 06/13/24 11:47

Lab Sample ID: LCS 670-95277/2-A

**Matrix: Solid** 

Analysis Batch: 95560

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Prep Batch: 95277

Analysis batch: 95560							Prep Batch: 95277
	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	0.0133	0.00632		mg/Kg		47	32 - 146
2-Methylnaphthalene	0.0133	0.00563		mg/Kg		42	33 - 137
Acenaphthene	0.0133	0.00720		mg/Kg		54	43 - 138
Acenaphthylene	0.0133	0.00652		mg/Kg		49	38 - 138
Anthracene	0.0133	0.00882		mg/Kg		66	58 - 137
Benzo[a]anthracene	0.0133	0.0117		mg/Kg		88	62 - 135
Benzo[a]pyrene	0.0133	0.0115		mg/Kg		86	56 - 141
Benzo[b]fluoranthene	0.0133	0.0124		mg/Kg		93	61 - 138
Benzo[g,h,i]perylene	0.0133	0.0157		mg/Kg		118	58 - 132
Benzo[k]fluoranthene	0.0133	0.0130		mg/Kg		97	61 - 141
Chrysene	0.0133	0.0118		mg/Kg		88	62 - 132

Project/Site: 1974 SR 16

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 670-95277/2-A

Client: Universal Engineering Sciences Inc

**Matrix: Solid** 

**Analysis Batch: 95560** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 95277

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Dibenz(a,h)anthracene	0.0133	0.0143		mg/Kg		107	60 - 138	
Fluoranthene	0.0133	0.0122		mg/Kg		92	65 - 140	
Fluorene	0.0133	0.00831		mg/Kg		62	46 - 131	
Indeno[1,2,3-cd]pyrene	0.0133	0.00958		mg/Kg		72	61 - 136	
Naphthalene	0.0133	0.00559		mg/Kg		42	37 - 140	
Phenanthrene	0.0133	0.00978		mg/Kg		73	52 - 140	
Pyrene	0.0133	0.0110		mg/Kg		82	63 - 138	

LCS LCS

Surrogate	%Recovery Q	ualifier	Limits
2-methylnaphthalene-d10	41		27 - 148
Fluoranthene-d10 (Surr)	91		37 - 150

## Method: FL-PRO - Florida - Petroleum Range Organics (GC)

Lab Sample ID: MB 670-94850/1-A

**Matrix: Solid** 

**Analysis Batch: 94838** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA Prep Batch: 94850

мв мв

PQL **Analyte** Result Qualifier MDL Unit Prepared **Analyzed** Dil Fac 21 U 42 06/10/24 09:30 06/10/24 18:56 Total Petroleum Hydrocarbons 21 mg/Kg

(C8-C40)

	МВ	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o- terphenyl (Surr)	88		66 - 136	06/10/24 09:30	06/10/24 18:56	1
C35 (Surr)	51		36 - 132	06/10/24 09:30	06/10/24 18:56	1

Lab Sample ID: LCS 670-94850/2-A

**Matrix: Solid** 

**Analysis Batch: 94838** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 94850

Spike LCS LCS Added Limits Analyte Result Qualifier Unit D %Rec Total Petroleum Hydrocarbons 111 107 55 - 130 mg/Kg 96

(C8-C40)

LCS LCS

Surrogate	%Recovery Qualifier	Limits
o- terphenyl (Surr)	117	66 - 136
C35 (Surr)	65	36 - 132

## Method: TPHCWG - TPH Criteria Working Group (CWG) Fractionation

MD MD

Lab Sample ID: MB 400-675317/1-A

**Matrix: Solid** 

**Analysis Batch: 675641** 

**Client Sample ID: Method Blank** Prep Type: Total/NA

**Prep Batch: 675317** 

	IVID	IVID							
Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Over C5-C6 aliphatics	25	U	50	25	mg/Kg		06/19/24 11:31	06/21/24 13:10	1
Over C6-C8 aliphatics	25	U	50	25	mg/Kg		06/19/24 11:31	06/21/24 13:10	1
Over C8-C10 aliphatics	25	U	50	25	mg/Kg		06/19/24 11:31	06/21/24 13:10	1
Over C10-C12 aliphatics	25	U	50	25	mg/Kg		06/19/24 11:31	06/21/24 13:10	1

Client: Universal Engineering Sciences Inc

Project/Site: 1974 SR 16

## Method: TPHCWG - TPH Criteria Working Group (CWG) Fractionation (Continued)

Lab Sample ID: MB 400-675317/1-A

**Matrix: Solid** 

Analysis Batch: 675641

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 675317** 

-	MB	MB						•	
Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Over C12-C16 aliphatics	25	U	50	25	mg/Kg		06/19/24 11:31	06/21/24 13:10	1
Over C16-C35 aliphatics	25	U	50	25	mg/Kg		06/19/24 11:31	06/21/24 13:10	1

Lab Sample ID: MB 400-675317/1-A

**Matrix: Solid** 

Analysis Batch: 675642

**Client Sample ID: Method Blank Prep Type: Total/NA** 

**Prep Batch: 675317** 

	MB	MB							
Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Over C5-C7 aromatics	20	U	20	20	mg/Kg		06/19/24 11:31	06/21/24 15:36	1
Over C7-C8 aromatics	25	U	35	25	mg/Kg		06/19/24 11:31	06/21/24 15:36	1
Over C8-C10 aromatics	25	U	50	25	mg/Kg		06/19/24 11:31	06/21/24 15:36	1
Over C10-C12 aromatics	25	U	50	25	mg/Kg		06/19/24 11:31	06/21/24 15:36	1
Over C12-C16 aromatics	25	U	50	25	mg/Kg		06/19/24 11:31	06/21/24 15:36	1
Over C16-C21 aromatics	25	U	50	25	mg/Kg		06/19/24 11:31	06/21/24 15:36	1
Over C21-C35 aromatics	25	U	50	25	mg/Kg		06/19/24 11:31	06/21/24 15:36	1
_									

Lab Sample ID: LCS 400-675317/2-A

**Matrix: Solid** 

**Analysis Batch: 675641** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 675317** 

LCS LCS %Rec Spike Result Qualifier Limits Analyte Added Unit D %Rec Over C6-C8 aliphatics 206 217 106 40 - 160 mg/Kg Over C8-C10 aliphatics 104 123 mg/Kg 119 40 - 160 Over C10-C12 aliphatics 97.2 148 mg/Kg 152 40 - 160 Over C12-C16 aliphatics 289 449 mg/Kg 155 40 - 160 Over C16-C35 aliphatics 389 579 mg/Kg 149 40 - 160

Lab Sample ID: LCS 400-675317/2-A

**Matrix: Solid** 

**Analysis Batch: 675642** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 675317** 

•	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Over C7-C8 aromatics	50.0	40.7		mg/Kg		81	40 - 160	
Over C8-C10 aromatics	144	160		mg/Kg		111	40 - 160	
Over C10-C12 aromatics	104	111		mg/Kg		106	40 - 160	
Over C12-C16 aromatics	113	75.8		mg/Kg		67	40 - 160	
Over C16-C21 aromatics	103	59.9		mg/Kg		58	40 - 160	
Over C21-C35 aromatics	24.8	27	U	mg/Kg		70	40 - 160	

Lab Sample ID: LCSD 400-675317/3-A

**Matrix: Solid** 

Analysis Batch: 675641

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA **Prep Batch: 675317** 

7 maryolo Batom 07 00-71							op De		,, 00	
-	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Over C6-C8 aliphatics	205	213		mg/Kg		104	40 - 160	2	50	
Over C8-C10 aliphatics	103	125		mg/Kg		120	40 - 160	1	50	
Over C10-C12 aliphatics	97.1	133		mg/Kg		137	40 - 160	11	50	
Over C12-C16 aliphatics	289	415		mg/Kg		144	40 - 160	8	50	
Over C16-C35 aliphatics	388	554		mg/Kg		143	40 - 160	4	50	

Client: Universal Engineering Sciences Inc

Project/Site: 1974 SR 16

## Method: TPHCWG - TPH Criteria Working Group (CWG) Fractionation (Continued)

Lab Sample ID: LCSD 400-675317/3-A

**Matrix: Solid** 

Analysis Batch: 675642

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 675317** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Over C7-C8 aromatics	50.0	42.9		mg/Kg		86	40 - 160	5	50
Over C8-C10 aromatics	144	141		mg/Kg		98	40 - 160	12	50
Over C10-C12 aromatics	104	89.4		mg/Kg		86	40 - 160	21	50
Over C12-C16 aromatics	113	73.4		mg/Kg		65	40 - 160	3	50
Over C16-C21 aromatics	103	57.2		mg/Kg		56	40 - 160	5	50
Over C21-C35 aromatics	24.8	27	U	mg/Kg		64	40 - 160	9	50

Lab Sample ID: 670-41208-2 MS

**Matrix: Solid** 

Analysis Batch: 675641

**Client Sample ID: SB-3** Prep Type: Total/NA

**Prep Batch: 675317** 

Spike MS MS %Rec Sample Sample Result Qualifier Result Qualifier Limits Analyte Added Unit D %Rec Over C6-C8 aliphatics 28 U 231 220 ₩ 40 - 160 mg/Kg 95 Over C8-C10 aliphatics 28 U 116 120 mg/Kg 103 40 - 160 ₩ Over C10-C12 aliphatics 28 U 109 131 mg/Kg ₩ 120 40 - 160 28 U 325 Over C12-C16 aliphatics 441 mg/Kg ÷Ċ÷ 136 40 - 160 Over C16-C35 aliphatics 450 436 662 mg/Kg 49 40 - 160

Lab Sample ID: 670-41208-2 MS

**Matrix: Solid** 

Analysis Batch: 675642

**Client Sample ID: SB-3** Prep Type: Total/NA **Prep Batch: 675317** 

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Over C7-C8 aromatics	28	U	56.2	46.7		mg/Kg	<del>*</del>	83	40 - 160	
Over C8-C10 aromatics	28	U	162	157		mg/Kg	₩	97	40 - 160	
Over C10-C12 aromatics	28	U	117	100		mg/Kg	₩	86	40 - 160	
Over C12-C16 aromatics	28	U	127	89.3		mg/Kg	₩	70	40 - 160	
Over C16-C21 aromatics	28	U	115	68.5		mg/Kg	₩	59	40 - 160	
Over C21-C35 aromatics	28	U	27.8	31	U	mg/Kg	☼	NC	40 - 160	

Lab Sample ID: 670-41208-2 MSD

**Matrix: Solid** 

**Analysis Batch: 675641** 

**Client Sample ID: SB-3** Prep Type: Total/NA **Prep Batch: 675317** 

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier %Rec Limits RPD Limit **Analyte** Unit D 28 U Over C6-C8 aliphatics 232 230 40 - 160 mg/Kg ₩ 99 5 50 Over C8-C10 aliphatics 28 U 117 123 mg/Kg ₩ 105 40 - 160 2 50 128 Over C10-C12 aliphatics 28 U 110 mg/Kg ₩ 117 40 - 160 3 50 Over C12-C16 aliphatics 28 U 327 419 mg/Kg 128 40 - 160 50 Over C16-C35 aliphatics 439 654 mg/Kg 47 40 - 160 50 450 Ö

Lab Sample ID: 670-41208-2 MSD

**Matrix: Solid** 

Analysis Batch: 675642

Client Sample ID: SB-3 Prep Type: Total/NA **Prep Batch: 675317** 

7 mary or Datom or ou in											•••
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Over C7-C8 aromatics	28	U	56.5	43.9		mg/Kg	<u></u>	78	40 - 160	6	50
Over C8-C10 aromatics	28	U	163	150		mg/Kg	₩	92	40 - 160	5	50
Over C10-C12 aromatics	28	U	117	99.0		mg/Kg	₩	84	40 - 160	1	50
	Analyte Over C7-C8 aromatics Over C8-C10 aromatics	Analyte         Result           Over C7-C8 aromatics         28           Over C8-C10 aromatics         28	Analyte         Result Qualifier           Over C7-C8 aromatics         28         U           Over C8-C10 aromatics         28         U	Analyte         Result Qualifier         Added Added           Over C7-C8 aromatics         28         U         56.5           Over C8-C10 aromatics         28         U         163	Analyte         Result Over C7-C8 aromatics         Result Over C8-C10 aromatics         Qualifier Over C8-C10 aromatics         Spike MSD Result Qualifier Added Result U         MSD Added Result U           0 Ver C8-C10 aromatics         28 U         163         150	AnalyteResult Over C7-C8 aromaticsResult Sample Result Over C8-C10 aromaticsSample Result Qualifier Added Sesult U Sesult Sesult U Sesult U Sesult Sesult U Se	Analyte         Result Over C7-C8 aromatics         Result Over C8-C10 aromatics         U         Spike Added Spike Added Spike Added Spike Added Spike Spike Spike Added Spike Spik	Sample AnalyteResult Over C7-C8 aromaticsQualifier 28USpike Added Spike Added Spike Added Spike Added Spike Spike Added Spike Spike Added Spike Spike Added Spike Spike Spike Spike Spike Added Spike Sp	Analyte         Result Over C7-C8 aromatics         Qualifier 28         U         Spike Added 56.5         MSD MSD MSD 48         WSD MSD MSD 48         WSD MSD MSD 48         MSD MSD MSD 48	Analyte         Result Over C7-C8 aromatics         Qualifier         Added Over C8-C10 aromatics         MSD MSD         WRec         MRec         Limits         MRec         MRec </td <td>Analyte         Result Over C7-C8 aromatics         Qualifier Unit Over C7-C8 aromatics         Result Over C8-C10 aromatics         Qualifier Unit Over C8-C5 Units Ov</td>	Analyte         Result Over C7-C8 aromatics         Qualifier Unit Over C7-C8 aromatics         Result Over C8-C10 aromatics         Qualifier Unit Over C8-C5 Units Ov

# **QC Sample Results**

Client: Universal Engineering Sciences Inc

Project/Site: 1974 SR 16

Job ID: 670-41208-1

# Method: TPHCWG - TPH Criteria Working Group (CWG) Fractionation (Continued)

Lab Sample ID: 670-41208-2 MSD

Matrix: Solid

Analysis Batch: 675642

Client Sample ID: SB-3 Prep Type: Total/NA Prep Batch: 675317

•	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Over C12-C16 aromatics	28	U	128	91.4		mg/Kg	<del>*</del>	72	40 - 160	2	50
Over C16-C21 aromatics	28	U	116	70.9		mg/Kg	₩	61	40 - 160	3	50
Over C21-C35 aromatics	28	U	28.0	31	U	mg/Kg	☼	NC	40 - 160	NC	50

11

16

14

# **QC Association Summary**

Client: Universal Engineering Sciences Inc Job ID: 670-41208-1

Project/Site: 1974 SR 16

# **GC/MS VOA**

#### Prep Batch: 94543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-41208-1	SB-1	Total/NA	Solid	5035	
670-41208-2 - DL	SB-3	Total/NA	Solid	5035	

#### **Analysis Batch: 95058**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-41208-1	SB-1	Total/NA	Solid	8260D	94543
670-41208-2 - DL	SB-3	Total/NA	Solid	8260D	94543
MB 670-95058/8	Method Blank	Total/NA	Solid	8260D	
LCS 670-95058/4	Lab Control Sample	Total/NA	Solid	8260D	
LCSD 670-95058/5	Lab Control Sample Dup	Total/NA	Solid	8260D	

#### GC/MS Semi VOA

#### Prep Batch: 95277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-41208-1	SB-1	Total/NA	Solid	3546	
670-41208-2	SB-3	Total/NA	Solid	3546	
MB 670-95277/1-A	Method Blank	Total/NA	Solid	3546	
LCS 670-95277/2-A	Lab Control Sample	Total/NA	Solid	3546	

#### **Analysis Batch: 95560**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-41208-1	SB-1	Total/NA	Solid	8270E SIM	95277
670-41208-2	SB-3	Total/NA	Solid	8270E SIM	95277
MB 670-95277/1-A	Method Blank	Total/NA	Solid	8270E SIM	95277
LCS 670-95277/2-A	Lab Control Sample	Total/NA	Solid	8270E SIM	95277

#### **GC Semi VOA**

#### **Analysis Batch: 94760**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-41208-1	SB-1	Total/NA	Solid	FL-PRO	94850
670-41208-2	SB-3	Total/NA	Solid	FL-PRO	94850

#### **Analysis Batch: 94838**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 670-94850/1-A	Method Blank	Total/NA	Solid	FL-PRO	94850
LCS 670-94850/2-A	Lab Control Sample	Total/NA	Solid	FL-PRO	94850

#### Prep Batch: 94850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-41208-1	SB-1	Total/NA	Solid	3546	
670-41208-2	SB-3	Total/NA	Solid	3546	
MB 670-94850/1-A	Method Blank	Total/NA	Solid	3546	
LCS 670-94850/2-A	Lab Control Sample	Total/NA	Solid	3546	

#### **Prep Batch: 675317**

Lab Sample ID 670-41208-2	Client Sample ID SB-3	Prep Type Total/NA	Matrix Solid	Method TPHCWG S Pre	Prep Batch
MB 400-675317/1-A	Method Blank	Total/NA	Solid	p TPHCWG_S_Pre	
				р	

**Eurofins Orlando** 

Page 17 of 27

# **QC Association Summary**

Client: Universal Engineering Sciences Inc Job ID: 670-41208-1

Project/Site: 1974 SR 16

# GC Semi VOA (Continued)

#### Prep Batch: 675317 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
LCS 400-675317/2-A	Lab Control Sample	Total/NA	Solid	TPHCWG_S_Pre
LCSD 400-675317/3-A	Lab Control Sample Dup	Total/NA	Solid	TPHCWG_S_Pre
670-41208-2 MS	SB-3	Total/NA	Solid	p TPHCWG S Pr€
	-			p
670-41208-2 MSD	SB-3	Total/NA	Solid	TPHCWG_S_Pre

#### **Prep Batch: 675553**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-41208-2	SB-3	Total/NA	Solid	TPH CWG Frac	675317

#### Analysis Batch: 675641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-41208-2	SB-3	Total/NA	Solid	TPHCWG	675553
MB 400-675317/1-A	Method Blank	Total/NA	Solid	TPHCWG	675317
LCS 400-675317/2-A	Lab Control Sample	Total/NA	Solid	TPHCWG	675317
LCSD 400-675317/3-A	Lab Control Sample Dup	Total/NA	Solid	TPHCWG	675317
670-41208-2 MS	SB-3	Total/NA	Solid	TPHCWG	675317
670-41208-2 MSD	SB-3	Total/NA	Solid	TPHCWG	675317

#### **Analysis Batch: 675642**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-41208-2	SB-3	Total/NA	Solid	TPHCWG	675553
MB 400-675317/1-A	Method Blank	Total/NA	Solid	TPHCWG	675317
LCS 400-675317/2-A	Lab Control Sample	Total/NA	Solid	TPHCWG	675317
LCSD 400-675317/3-A	Lab Control Sample Dup	Total/NA	Solid	TPHCWG	675317
670-41208-2 MS	SB-3	Total/NA	Solid	TPHCWG	675317
670-41208-2 MSD	SB-3	Total/NA	Solid	TPHCWG	675317

# **General Chemistry**

#### Analysis Batch: 94640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-41208-2	SB-3	Total/NA	Solid	Moisture	

#### **Analysis Batch: 95050**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
670-41208-1	SB-1	Total/NA	Solid	Moisture	

Client Sample ID: SB-1 Lab Sample ID: 670-41208-1 Date Collected: 06/06/24 13:35

Matrix: Solid

Date Received: 06/07/24 07:30

Client: Universal Engineering Sciences Inc

		Batch	Batch		Dilution	Batch			Prepared
	Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
l	Total/NA	Analysis	Moisture			95050	RB	EET ORL	06/10/24 15:39

Client Sample ID: SB-1 Lab Sample ID: 670-41208-1

Date Collected: 06/06/24 13:35 **Matrix: Solid** Date Received: 06/07/24 07:30 Percent Solids: 80.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			94543	RG	EET ORL	06/07/24 12:29
Total/NA	Analysis	8260D		1	95058	P1K	EET ORL	06/11/24 18:34
Total/NA	Prep	3546			95277	RP	EET ORL	06/12/24 06:15
Total/NA	Analysis	8270E SIM		1	95560	JI	EET ORL	06/13/24 18:07
Total/NA	Prep	3546			94850	FC	EET ORL	06/10/24 09:30
Total/NA	Analysis	FL-PRO		1	94760	JR	EET ORL	06/10/24 22:26

Client Sample ID: SB-3 Lab Sample ID: 670-41208-2

Date Collected: 06/06/24 13:50 **Matrix: Solid** 

Date Received: 06/07/24 07:30

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	Moisture		1	94640	RB	EET ORL	06/07/24 11:33

Client Sample ID: SB-3 Lab Sample ID: 670-41208-2 Date Collected: 06/06/24 13:50 Matrix: Solid Date Received: 06/07/24 07:30 Percent Solids: 88.4

Batch **Batch** Dilution Batch Prepared **Prep Type** Method **Factor** Number Analyst or Analyzed Type Run Lab 06/07/24 12:29 Total/NA Prep 5035 DL 94543 RG EET ORL Total/NA DL 8260D 50 95058 P1K **EET ORL** 06/11/24 18:55 Analysis Total/NA Prep 3546 95277 RP **EET ORL** 06/12/24 06:15 Total/NA Analysis 8270E SIM **EET ORL** 06/13/24 18:30 1 95560 J١ Total/NA 3546 94850 FC **EET ORL** 06/10/24 09:30 Prep EET ORL Total/NA Analysis FL-PRO 1 94760 JR 06/10/24 22:44 Total/NA TPHCWG S Prep 675317 BJ EET PEN 06/19/24 11:31 Prep Total/NA Prep **TPH CWG Frac** 675553 MP **EET PEN** 06/20/24 14:49 Total/NA Analysis **TPHCWG** 675641 MP **EET PEN** 06/21/24 14:12 Total/NA Prep TPHCWG S Prep 675317 BJ **EET PEN** 06/19/24 11:31 Total/NA **TPH CWG Frac** 675553 MP **EET PEN** 06/20/24 14:49 Prep Total/NA **TPHCWG** 06/21/24 17:01 Analysis 675642 MP **EET PEN** 1

**Laboratory References:** 

EET ORL = Eurofins Orlando, 481 Newburyport Avenue, Altamonte Springs, FL 32701, TEL (407)339-5984

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

**Eurofins Orlando** 

# **Accreditation/Certification Summary**

Client: Universal Engineering Sciences Inc

Project/Site: 1974 SR 16

Job ID: 670-41208-1

# **Laboratory: Eurofins Orlando**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

uthority P		am	Identification Number	Expiration Date		
Florida	NELA	<b>D</b>	E83018	06-30-24		
,	s are included in this repo does not offer certification	,	not certified by the governing authori	ty. This list may include analyte		
,	•	,	not certified by the governing authori Analyte	ty. This list may include analyte		
for which the agency	does not offer certification		, , ,	ty. This list may include analyte		

# **Laboratory: Eurofins Pensacola**

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-24
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-00689	08-01-24
California	State	2510	06-30-24
Florida	NELAP	E81010	06-30-24
Georgia	State	E81010(FL)	06-30-24
Illinois	NELAP	200041	10-09-24
Kansas	NELAP	E-10253	10-31-24
Kentucky (UST)	State	53	06-30-24
Louisiana (All)	NELAP	30976	06-30-24
Louisiana (DW)	State	LA017	12-31-24
North Carolina (WW/SW)	State	314	12-31-24
Oklahoma	NELAP	9810	08-31-24
Pennsylvania	NELAP	68-00467	01-31-25
South Carolina	State	96026	06-30-24
Tennessee	State	TN02907	06-30-24
Texas	NELAP	T104704286	09-30-24
US Fish & Wildlife	US Federal Programs	A22340	06-30-24
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	01-09-26
Virginia	NELAP	460166	06-14-25
West Virginia DEP	State	136	03-31-25

**Eurofins Orlando** 

2

6

8

10

11

13

# **Method Summary**

Client: Universal Engineering Sciences Inc

Project/Site: 1974 SR 16

Job ID: 670-41208-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET ORL
8270E SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	EET ORL
FL-PRO	Florida - Petroleum Range Organics (GC)	FL-DEP	EET ORL
TPHCWG	TPH Criteria Working Group (CWG) Fractionation	TPH CWG	EET PEN
Moisture	Percent Moisture	EPA	EET ORL
3546	Microwave Extraction	SW846	EET ORL
5035	Closed System Purge and Trap	SW846	EET ORL
TPH CWG Frac	TPH Criteria Working Group (CWG) Fractionation - Water	TPH CWG	EET PEN
TPHCWG_S_Prep	TPH Criteria Working Group Solid Preparation	TPH CWG	EET PEN

#### **Protocol References:**

EPA = US Environmental Protection Agency

FL-DEP = State Of Florida Department Of Environmental Protection, Florida Administrative Code.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TPH CWG = Total Petroleum Hydrocarbon Criteria Working Group

#### **Laboratory References:**

EET ORL = Eurofins Orlando, 481 Newburyport Avenue, Altamonte Springs, FL 32701, TEL (407)339-5984

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# **Sample Summary**

Client: Universal Engineering Sciences Inc Project/Site: 1974 SR 16

Job ID: 670-41208-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
670-41208-1	SB-1	Solid	06/06/24 13:35	06/07/24 07:30
670-41208-2	SB-3	Solid	06/06/24 13:50	06/07/24 07:30

#### **Eurofins Jacksonville**

8021-6 Philips Highway Jacksonville, FL 32256 **Chain of Custody Record** 

	· ·	
4.0	eurofins	
2.0	Cuiuliii	

**Environment Testing** 

Phone: 904-296-3007 Fax: 904-296-6210																	
Client Information	Sample TON	1 Be	orcher	T No	ab PM: lordmark	k, Ka	ithryn				Carrie	er Tracking	No(s):		COC No: 762-4491-66	39.1	
Client Contact: Mr. Thomas Borchert	Phone: 704-	-859	7-276	3 kr	-Mail: athryn.n	ordm	nark@e	et.eurofi	insus.co	om	State	of Origin:	FL	-	Page: Page 1 of 1		
Company: Universal Engineering Sciences Inc			PWSID:						Analy	sis R	eques	ted			Job #:		
Address: 5561 Florida Mining Boulevard, South	Due Date Requeste	dad	5 de	24											Preservation N - None		
City: Jacksonville	TAT Requested (da	ays):		/										6	FJ - MeOH/DI H	120	
State, Zip: FL, 32257	Compliance Projec	ct: A Yes	Δ Νο		September 1												
Phone: 904-859-2763(Tel)	PO#: Purchase Order	r not require	ed		<u></u>												
Email: tborchert@teamues.com	WO #:				or NG	<u>o</u>								90			
Project Name: 1974 SR 16	Project #: 76200726				9 (Yes	S or P	IOISIO							talner			
Site	SSOW#:				Sample	SD (Y	TBE							of con	Other:		
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)		Fleid Filts									Total Number of containers	Specia	al Instructio	ons/Note:
AND THE PERSON OF THE PERSON O		><	Preserva	ation Code:			FJ							X			
SB-3	6-6-24	1335	G	Solid		-	//										
58-3	6.6.24	1350	6	Solid		1	1/										
														011			
					4	$\perp$								6			
					$\bot$	$\perp$				$\sqcup$	$\perp \perp$						
						+											
70-41208 Chain of Custody					+	$\bot$		1	$\bot$		$\perp$		<del>                                     </del>				
					+	+		$\vdash$	+		+		-				
Possible Hazard Identification					s	Samp	ole Dist	posal (	A fee r	may be	asses	sed if sa	amples ar	re retain	ed longer tha	n 1 month)	
Non-Hazard Flammable Skin Irritant Flammable Requested: I, II, III, IV, Other (specify)	Poison B Unkno	own	Radiological				Return	To Clie	ient /QC Re		] Dispos	sal By La	ab [	Arch		Mon	
Empty Kit Relinquished by:		Date:			Time		/	10	-/	7-1	4	Method of	Shipment				
Relinquished by:	Date/Time:		434 °	Company		Red	eceived by	11 0	Nh	1	7		Date/Time:	124	1434	Company	94T
Relinquished My:  Relinquished by:	Date/Tines/24	2 /7	100	Company	1		ceived by			a.	8		Date/Time	1.24	073		
0	Date/Time.			Joinpany			·						Date/Time			Compan	
Custody Seal No.:						Cod	oler Tem	ipocature	(s) °C and	d Other F	Remarks:	100	T	-1	910	0	a /19

Page 23 of 27

2

3

5

1

9

12

14

# **Chain of Custody Record**

**Eurofins Orlando** 

😯 eurofins

	Chain of Custody Record	oliaill of odelody recold		
Eurofins Orlando	481 Newburyport Avenue	Altamonte Springs, FL 32701	Phone: 407-339-5984 Fax: 407-260-6110	

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Nordm	Lab PM: Nordmark: Kathryn	ş		Carrier Tracking No(s):	g No(s):	COC No: 670-31014.1	<u> </u>	
Client Contact:	Phone:	E-Mail:				State of Origin:		Page:		1
Shipping/Receiving		kathry	n.nordmar	kathryn.nordmark@et.eurofinsus.com	nsus.com	Florida		Page 1 of 1	-	- 1
Company: Eurofins Environment Testing Southeast L		<b>4 Z</b>	Accreditations Requ NELAP - Florida	Accreditations Required (See note): NELAP - Florida	note):			Job #: 670-41208-1	3-1	
Address: 3355 McLemore Drive, ,	Due Date Requested: 6/25/2024				Analysis Requested	quested		Preservation Codes:	on Codes:	
City: Pensacola	TAT Requested (days):									
State, Ap. FL, 32514			73-5							
Phone: 850-474-1001(Tel) 850-478-2671(Fax)	PO#:	()								
Email:	WO#:	N 10 8	(oN					rs.		
Project Name: 1974 SR 16	Project #: 76200726		10 S9					ənistr		
Site:	SSOW#:		y) as					of coi		
Sample identification - Client ID (Lab ID)	Sample Date Time G=crab)	Matrix (W=water, S=solid, O=waste/oll, BT=Tissue, A=Ar)	Field Filtered MSM myorp DH9TVGWGTPH9T					Total Number	Special Instructions/Note:	
	X	1 (0	X						$\left\{ \left[ $	۱ ۱
SB-3 (670-41208-2)	6/6/24 13:50	Solid	×					-		
										1
										1
										ŀ
										1
										- 1
										- 1
										1
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratory accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.	Int Testing Southeast, LLC places the ownership ralysis/fests/matrix being analyzed, the samples ion immediately. If all requested accreditations	of method, analyte & must be shipped bac are current to date, re	accreditation k to the Euro	compliance u	pon our subcontrac nt Testing Southes stody attesting to s	t laboratories. T st, LLC laborator	his sample shipmory or other instruct be Eurofins Environ	ant is forwarded und lons will be provide ment Testing Soutt	er chain-of-custody. If the labora's. Any changes to accreditation east, LLC.	l ĝ
Possible Hazard Identification			Sample	Disposal (	A fee may be	assessed if a	samples are r	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)	than 1 month)	1
Unconfirmed				Return To Client	ent .	l Disposal By Lab	ab	Archive For	Months	- 1
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2		Special	Instructions	Special Instructions/QC Requirements					
Empty Kit Relinquished by:	Date:		Time:			Method	Method of Shipment:			1
Relinquished by:	Date/Time:	Company	**************************************	Received by:	\		Date/Time:	12 41	Company 7	
Relinquished by:	Date/Time:	Company	Rece	eceived by:			Date/Time:		Company	
1 1	Date/Time:	Company	Rece	Received by:			Date/Time:		Сомрапу	
Custody Seals Intact: Custody Seal No.: △ Yes △ No			<u></u>	r Temperature	Cooler Temperature(s) °C and Other Remarks:	emarks:				l
				}	-				Ver. 04/02/2024	1

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.

2. Fold the printed page along the norizontal line.

3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

FedEx Service Guide. precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current be responsible for any claim respectations of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, be responsible for any claim. It is not consider that the current FedEx sets of sales, income interest, profit, sets of sales, income interest, profit, sets of carried from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, sets of carried from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, afterney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Miritan claims must be fled within strict time limits and other forms of appropriate metals. Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not

# Login Sample Receipt Checklist

Client: Universal Engineering Sciences Inc Job Number: 670-41208-1

Login Number: 41208 List Source: Eurofins Orlando

List Number: 1

Creator: Lavardera, Angelina

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <a href="mailto:smm">&lt;6mm</a> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

2

4

1

9

11

13

1

Client: Universal Engineering Sciences Inc

Job Number: 670-41208-1

List Source: Eurofins Pensacola
List Number: 2
List Creation: 06/18/24 02:01 PM

Creator: Pardonner. Brett

Creator: Pardonner, Brett		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.5°C IR11
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**Eurofins Orlando** 

# APPENDIX C



Grounded in Excellence

#### Benzo(a)pyrene Conversion Table

For Direct Exposure Soil Cleanup Target Levels

Site Name: State Road 16 Parcel Phase II ESA

Location: 1974 State Road 16

St. Augustine, Florida

Soil Sample No. SB-1

Sample Date 6/6/2024
Location: See Site Map

Depth (ft): 1

<u>INSTRUCTIONS</u>: Calculate Total Benzo(a)pyrene Equivalents <u>if at least one of the carcinogenic PAHs is detected in the sample</u> at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a "J", "T" or "I" qualifier). Enter the contaminant concentrations (in mg/kg) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):

- 1. If quantified with certainty, or estimated and has the "J" qualifier, enter the reported value;
- 2. If not detected at the MDL (the concentration reported is the MDL followed by the "U" qualifier) enter 1/2 of the reported value;
- 3. If detected at a concentration lower than the MDL and the concentration is estimated (has the "T" qualifier) enter the estimated value;
- 4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "I" qualifier) enter the estimated value;
- 5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the "M" qualifier) enter 1/2 of the reported value.

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	0.00080	1.0	0.00080
Benzo(a)anthracene	0.00390	0.1	0.00039
Benzo(b)fluoranthene	0.00500	0.1	0.00050
Benzo(k)fluoranthene	0.00110	0.01	0.00001
Chrysene	0.00490	0.001	0.0000
Dibenz(a,h)anthracene	0.00140	1.0	0.00140
Indeno(1,2,3-cd)pyrene	0.00150	0.1	0.00015

DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg

Total Benzo(a)pyrene Equivalents = 0.00326

The concentration shown does not exceed the Residential Direct Exposure SCTL of 0.1 mg/kg.

The concentration shown does not exceed the Industrial Direct Exposure SCTL of 0.7 mg/kg.

Summary Criteria for Table Entries					
Detection	Concentration Reported	Data Qualifier	Enter		
Various	Quantified with certainty	None	reported value		
Various	Estimated	J	reported (estimated) value		
ND at MDL	MDL	U	1/2 reported value		
< MDL	Estimated	Т	reported (estimated) value		
≥ MDL but < PQL	Estimated	I	reported (estimated) value		
≥ MDL but < PQL	PQL	M	1/2 reported value		

#### Benzo(a)pyrene Conversion Table

For Direct Exposure Soil Cleanup Target Levels

Site Name: State Road 16 Parcel Phase II ESA

Location: 1974 State Road 16

St. Augustine, Florida

Soil Sample No. SB-3

 Sample Date
 6/6/2024

 Location:
 See Site Map

Depth (ft): 3

<u>INSTRUCTIONS</u>: Calculate Total Benzo(a)pyrene Equivalents <u>if at least one of the carcinogenic PAHs is detected in the sample</u> at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a "J", "T" or "I" qualifier). Enter the contaminant concentrations (in mg/kg) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):

- 1. If quantified with certainty, or estimated and has the "J" qualifier, enter the reported value;
- 2. If not detected at the MDL (the concentration reported is the MDL followed by the "U" qualifier) enter 1/2 of the reported value;
- 3. If detected at a concentration lower than the MDL and the concentration is estimated (has the "T" qualifier) enter the estimated value;
- 4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "I" qualifier) enter the estimated value;
- 5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the "M" qualifier) enter 1/2 of the reported value.

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	0.00510	1.0	0.00510
Benzo(a)anthracene	0.00360	0.1	0.00036
Benzo(b)fluoranthene	0.00500	0.1	0.00050
Benzo(k)fluoranthene	0.00210	0.01	0.00002
Chrysene	0.00440	0.001	0.00000
Dibenz(a,h)anthracene	0.00130	1.0	0.00130
Indeno(1,2,3-cd)pyrene	0.00310	0.1	0.00031

DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg

Total Benzo(a)pyrene Equivalents = 0.00760

The concentration shown does not exceed the Residential Direct Exposure SCTL of 0.1 mg/kg.

The concentration shown does not exceed the Industrial Direct Exposure SCTL of 0.7 mg/kg.

Summary Criteria for Table Entries					
Detection	Concentration Reported	Data Qualifier	Enter		
Various	Quantified with certainty	None	reported value		
Various	Estimated	J	reported (estimated) value		
ND at MDL	MDL	U	1/2 reported value		
< MDL	Estimated	Т	reported (estimated) value		
≥ MDL but < PQL	Estimated	1	reported (estimated) value		
≥ MDL but < PQL	PQL	M	1/2 reported value		