

NV

Memorandum

To: Nelson Velez, Environmental Bureau | EMNRD - Oil Conservation Division

From: Mitch Killough, Hilcorp Energy Company (Hilcorp)

Date: 1/5/2023

Subject: Plugging Reports - Kaufman No. 1 (Incident No. NCS1833331001) - AP-138

Background: On 11/16/18, approximately 8 barrels (bbl) of oil and 10 bbl of produced water was released from the storage tank. Enduring Resources was the operator of record at the time of the release; Hilcorp assumed operations of the Site on or about 12/1/2018. After Hilcorp assumed operations, the well was temporarily abandoned. All surface equipment within the tank battery was removed, and impacted soil within the battery was excavated and transported to off-site disposal. Initial soil abatement included an excavation approximately 50 ft by 60 ft with a depth ranging from 1 ft to 5 ft bgs. To delineate impacted groundwater, six groundwater monitoring wells (i.e., MW1 – MW6) were installed in January 2019. Subsequent soil abatement activities were conducted in November 2019. Abatement included excavating and disposal of impacted soil in and around the initial excavation (i.e., former tank battery). Soil exceeding soil-to-groundwater migration criteria and soil exceeding the ecological protective concentration limits (PCLs) was excavated and removed from the site. The excavation was backfilled following confirmation sample and analysis. In November 2019, Timberwolf began quarterly groundwater monitoring at the Site. The monitoring included evaluation of Site groundwater and a hydrological assessment of Site groundwater and its relationship to the La Plata River. Consecutive quarterly monitoring was conducted from November 2019 through September 2021. Analytical results revealed that all constituents of concern (COCs) were below regulatory criteria. On 10/20/2022, NMOCD determined that Hilcorp met the requirements of NMAC 19.15.30 and no further action is required. Additional background data can be referenced in the Abatement Completion Report (dated 1/22/2022).

Scope: Hilcorp is providing copies of the monitoring well plugging reports. As requested by the NMOCD on 10/20/2022, Hilcorp is required to provide the plugging reports that were submitted to the New Mexico Office of the State Engineer. Per NMOSE Permit SJ-4327 POD1 - POD6 (dated 12/31/2018), Hilcorp followed the approved plugging plan requirements in Condition 10.

Enclosures: Plugging Records

Abatement Completion Report (dated 1/22/2022, approved 10/20/2022)

NMOSE Permit Approval for Monitoring Wells, SJ-4327 POD1 – POD6 (dated 12/31/2018)

Hilcorp Energy Company 1111 Travis Street, Houston, Texas 77002

T 713.209.2400 F 713.289.2750



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

	NERAL / WELL OWNERSHIP:			
State Er	ngineer Well Number: Hilcorp Kaufman	#1 Release MW#1 SJ-	4327 POD 1	
Well ov	wner: Hilcorp Energy Company		Phone No.:	(505) 599-3400
Mailing	g address: 382 Road 3100			
City: _	Aztec	State:	New Mexico	Zip code: 87410
	ELL PLUGGING INFORMATION:	MW Flort	rio Inc	*4
1)	Name of well drilling company that plu	agged well:	ne me.	
2)	New Mexico Well Driller License No.:	WD-1842	Ex	piration Date: 5/4/2024
3)	Well plugging activities were supervise Chad Stotts			
4)	Date well plugging began: 12/27	1/22 Date	well plugging conclude	d: 12/27/22
5)	GPS Well Location: Latitude: Longitude: _		51 min, 35.60 12 min, 12.0	
6)	Depth of well confirmed at initiation of by the following manner: Ridgid Tape		ft below ground leve	ęl (bgl),
7)	Static water level measured at initiation	of plugging:5	ft bgl	
8)	Date well plugging plan of operations v	was approved by the St	ate Engineer: 12/31/20	018
9)	Were all plugging activities consistent differences between the approved plugg			
				,
Ĺ	53			
128	6			
	F			
	28			
	DEC 3			
	2 01			
CO	O .			

Version: September 8, 2009

Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	15.6 PPG Class III neat cement from 15'(TD) to surface	2.75 gallong Next leasent	2.5 Gallons	Tremie	
_			3Y AND OBTAIN 1805 = gallons 197 = gallons		

III. SIGNATURE:

I, Chad Stotts

, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

2022 DEC 28 VW 9 23

Signature of Well Driller

Date

STATE ENGINEER OFFICE AZTEC, NEW MEXICO

Version: September 8, 2009 Page 2 of 2



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

	NERAL / WELL OWNERSHIP:		
State	siigineer wen rumeer.	SJ-4327 POD 2	
	owner: Hilcorp Energy Company	Phone No.: (5)	05) 599-3400
	ng address: 382 Road 3100		
City:	Aztec State:	New Mexico	Zip code: <u>87410</u>
<u>п. w</u>	ELL PLUGGING INFORMATION:		
1)	Name of well drilling company that plugged well: MW Elect	ric Inc.	
2)	New Mexico Well Driller License No.: WD-1842	Expi	ration Date: <u>5/4/2024</u>
3)	Well plugging activities were supervised by the following we Chad Stotts	ll driller(s)/rig supervisor(s):
4)	Date well plugging began: 12/27/22 Date	well plugging concluded	12/27/22
5)	GPS Well Location: Latitude: N36 deg,	51 min, 36.252 12 min, 12.06	sec sec, WGS 84
6)	Depth of well confirmed at initiation of plugging as:15 by the following manner: Ridgid Tape	ft below ground level	(bgl),
7)	Static water level measured at initiation of plugging:5	ft bgl	
8)	Date well plugging plan of operations was approved by the St	tate Engineer: 12/31/201	8
9)	Were all plugging activities consistent with an approved plug differences between the approved plugging plan and the well	ging plan? Yes as it was plugged (attach a	additional pages as needed):
			STATE ENGINEER OFFICE AZTEC, NEW MEXICO 1022 DEC 28 AM 9 23

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	15.6 PPG Class II neat cement from 15' (TD) to surface	2.75 gallons west Cout.	2.5 Gallons	Tremie	
					STATE ENGINEER OFFICE AZTEC, NEW MEXICO 2022 DEC 28 AM 9 23
		MULTIPLY E cubic feet x 7.4 cubic yards x 201 9	BY AND OBTAIN 805 = gallons 97 = gallons		

III. SIGNATURE:

I, Chad Stotts , say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller

Date



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

	e Engineer Well Number: Hilcorp Kaufman #1 I owner: Hilcorp Energy Company			(505) 500-3400	
Mail	ling address: 382 Road 3100		Phone No.:	(505) 599-3400	
City	Aztec	C: .	New Mexico		87/10
City	. 72.60	State:	New Mexico	Zip code:	
11 7	WELL PLUGGING INFORMATION:				
1)	Name of well drilling company that plugg	ed well: MW E	lectric Inc.		
2)	New Mexico Well Driller License No.: V	VD-1842	E	xpiration Date: 5	/4/2024
3)	Well plugging activities were supervised l Chad Stotts	by the following	well driller(s)/rig supervi	sor(s):	
4)	Date well plugging began: 12/27/	/22 I	Date well plugging conclu	ded: 12/27	122
5)	GPS Well Location: Latitude: Longitude:	N36 deg W108 deg		.82 sec 124 sec, WGS 8	84
6)	Depth of well confirmed at initiation of pl by the following manner: Ridgid Tape	ugging as:	15 ft below ground le	vel (bgl),	
7)	Static water level measured at initiation of	f plugging:	5 ft bgl		
8)	Date well plugging plan of operations was	s approved by th	e State Engineer: 12/31/	2018	
9)	Were all plugging activities consistent wit differences between the approved pluggin	th an approved p g plan and the v	olugging plan? Yes vell as it was plugged (atta	If not, p	lease describe
					2 2
					8
					A SE
					200
					23

Version: September 8, 2009 Page 1 of 2

.

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	15.6 PPG Class (i) neat cement from 15' (TD) to surface	2.5 gallons	2.5 Gallons	Tremie	
					STATE ENGINEER O AZTEC, NEVIMEX 2022 DEC 28 AM
		MULTIPLY	BY AND OBTAIN		OFFICE (CO) 9 23
			1805 = gallons		

III. SIGNATURE:

I, Chad Stotts , say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller

Date

Version: September 8, 2009 Page 2 of 2



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

	NERAL / WELL OWNER						
State E	ngineer Well Number: Hilo	orp Kaufman #1 Releas	se MW#4 SJ-43				
Well o	wner: Hilcorp Energy Com	pany		Phone No.: (5	05) 599-3400		
Mailing	g address: 382 Road 3100						
City: _		St	ate:N	lew Mexico	Zip code:	87410	
II. WI	ELL PLUGGING INFOR	MATION:					
1)	Name of well drilling cor	npany that plugged wel	l: MW Electric In	D			
2)	New Mexico Well Driller	r License No.: WD-184	12	Expi	ration Date: 5	/4/2024	
3)	Well plugging activities v Chad Stotts	were supervised by the	following well dri	ller(s)/rig supervisor	(s):		
4)	Date well plugging begar	12/27/2	2 Date well	plugging concluded	12/2-	7/22	<u> </u>
5)	GPS Well Location:	Latitude: N36 Longitude: W108	deg,51 Bdeg,12			4	
6)	Depth of well confirmed by the following manner:	at initiation of plugging Ridgid Tape	; as:15f	below ground level	(bgl),		
7)	Static water level measur	ed at initiation of plugg	ing:5f	t bgl			
8)	Date well plugging plan	of operations was appro	ved by the State E	ngineer:12/31/201	8		
9)	Were all plugging activiti differences between the a	es consistent with an approved plugging plan	oproved plugging and the well as it	plan? Yes was plugged (attach	If not, pladditional page	ease desc s as neede	cribe d):
						2022 DEC 28 AM 9 23	STATE ENGINEER OFFICE AZTEC, NEW MEXICO

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	15.6 PPG Class III neat cement from 15' (TD) to surface	2.75 gallors 15.2 pg das yn wast count	2.5 Gallons	Tremie	STAT
-		MULTIPLY E cubic feet x 7.4 cubic yards x 201.9	9Y AND OBTAIN 1805 = gallons 37 = gallons		TEC, NEW MEXICO DEC 28 AM 9 24

III. SIGNATURE:

I, Chad Stotts , say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller

Date

Version: September 8, 2009 Page 2 of 2



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

	TERAL / WELL OWNERSHIP:		
State Er	ignicel well Number.	327 POD 5	
	wner: Hilcorp Energy Company	Phone No.: (505) 599-3400
Mailing	address: 382 Road 3100		
City: A	Aztec State:	New Mexico	Zip code: 87410
H WE	TA DI LICCING INFORMATION.		
1)	Name of well drilling company that plugged well: MW Electric In	nc.	
2)	New Mexico Well Driller License No.: WD-1842	Expirat	ion Date: 5/4/2024
3)	Well plugging activities were supervised by the following well dri	iller(s)/rig supervisor(s)	:
4)	Date well plugging began: $\frac{12/27/22}{}$ Date well	l plugging concluded: _	12/27/22
5)	GPS Well Location: Latitude: N36 deg, 5 Longitude: W108 deg, 12	1 min, 35.172 2 min, 12.995	sec sec, WGS 84
6)	Depth of well confirmed at initiation of plugging as:151 by the following manner: Ridgid Tape	ft below ground level (b	gl),
7)	Static water level measured at initiation of plugging:5	ft bgl	
8)	Date well plugging plan of operations was approved by the State I	Engineer:12/31/2018	
9)	Were all plugging activities consistent with an approved plugging differences between the approved plugging plan and the well as it		
			SIATE ENGMEER OFFICE AZTEC, NEW MEXICO 122 DEC 28 AM 9 23

Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	15.6 PPG Class III neat cement from 15' (TD) to surface	2.75 gallons 15.2 pag class II weatent	2.5 Gallons	Tremie	
					STATE ENGINEER OFFI AZTEC, NEW MEXICO 2022 DEC 28 AM 9
-					∓ICE CO 9 24
_		MULTIPLY E cubic feet x 7.4 cubic yards x 201.9	3Y AND OBTAIN 805 = gallons 97 = gallons		

III. SIGNATURE:

I, Chad Stotts , say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller

Date

Version: September 8, 2009 Page 2 of 2



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:	
State Engineer Well Number: Hilcorp Kaufman #1 Release MW#6	SJ-4327 POD 6
Well owner: Hilcorp Energy Company	Phone No.: (505) 599-3400
Mailing address: 382 Road 3100	N. M. M
City: Aztec State:	New Mexico Zip code: 87410
II. WELL PLUGGING INFORMATION:	stric Inc
1) Name of well drilling company that plugged well: MW Elec	
2) New Mexico Well Driller License No.: WD-1842	Expiration Date: 5/4/2024
 Well plugging activities were supervised by the following w Chad Stotts 	ell driller(s)/rig supervisor(s):
4) Date well plugging began: 12/27/22 Date	te well plugging concluded: (2/27/22
5) GPS Well Location: Latitude: N36 deg, Longitude: W108 deg,	
6) Depth of well confirmed at initiation of plugging as:15 by the following manner: Ridgid Tape	ft below ground level (bgl),
7) Static water level measured at initiation of plugging:5	
8) Date well plugging plan of operations was approved by the	State Engineer:
Were all plugging activities consistent with an approved plu differences between the approved plugging plan and the wel	gging plan? Yes If not, please describe
	20:
	AZTEC 2022 DEC
	EC 2
	28
	AM NO
	9
	23

Version: September 8, 2009

Page 1 of 2

Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging <u>Material Used</u> (include any additives used)	Volume of <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	15.6 PPG Class of neat cement from 15' (TD) to surface	2.95 galdons 15.2 ppg Nation	2.5 Gallons	Tremie	
-			BY AND OBTAIN BNS = gallons		STATE ENGINEER OFFICE AZTEC, NEW MEXICO 2022 DEC 28 AM 9 24
		cubic feet x 7.4 cubic yards x 201.5	1805 = gallons 97 = gallons		

III. SIGNATURE:

I, Chad Stotts , say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller

Date

Version: September 8, 2009 Page 2 of 2

REVIEWED

By Nelson Velez at 1:53 pm, Oct 21, 2022

Review of the January 22, 2022 ABATEMENT COMPLETION REPORT: Content satisfactory

Operator has successfully completed the standards set forth in NMAC 19.15.30.9, Abatement Standards and Requirements. Director has approved this Abatement Completion Report (letter attached at the end of the report). Termination of abatement plan (AP-0138) is finalized.

ABATEMENT COMPLETION REPORT

KAUFMAN NO. 1 HILCORP ENERGY COMPANY SAN JUAN COUNTY, NEW MEXICO

OCD No.: AP-0138

January 22, 2022

Prepared for:

New Mexico Oil Conservation Division – District 3 1000 Rio Brazos Road Aztec, New Mexico 87410

Prepared by:



TIMBERWOLF ENVIRONMENTAL, LLC

1920 W. Villa Maria, Suite 205 Bryan, Texas 77807 979-324-2139 On behalf of:



HILCORP ENERGY COMPANY

1111 Travis Street Houston, Texas 77002 713-209-2400

ABATEMENT COMPLETION REPORT

KAUFMAN NO. 1 HILCORP ENERGY COMPANY SAN JUAN COUNTY, NEW MEXICO OCD No.: AP-0138

January 22, 2022

On behalf of Hilcorp Energy Company (Hilcorp), Timberwolf Environmental, LLC (Timberwolf) presents this report which documents soil and groundwater abatement, groundwater monitoring activities, and request for site closure.

This report was prepared by the following Timberwolf personnel:

C-for-	01/22/22
Michael Morse	Date
Project Scientist	
RY	01/22/22
Ryan S. Mersmann, P.G., CPSS	Date
Vice President of Operations	
for Short	01/22/22
Jim Foster	Date
President	

Timberwolf Project No. HEC-180061

Table of Contents

			<u>Page</u>
Intro	oductio	on and Certification	i
1.0	Over	view	1
	1.1	Introduction	
	1.2	Site Description and Environmental Setting	1
	1.3	Site Geology and Hydrology	1
	1.4	Site History	
	1.5	Soil Assessment	3
	1.6	Soil Abatement	3
	1.7	Groundwater Assessment	4
	1.8	Groundwater Abatement	5
2.0	COC	s, Remedial Targets, and Closure Criteria	6
	2.1	Introduction	6
	2.2	COCs	6
	2.3	Remedial Targets for Soil	6
	2.4	Remedial Targets for Groundwater	8
	2.5	Site Closure Criteria	10
3.0	Site 1	Monitoring	11
	3.1	Introduction	11
	3.2	Groundwater Gauging Methodology	11
	3.3	Results of Gauging Data and Hydrological Assessment of the La Plata River	11
	3.4	Groundwater Sample Methodology	12
	3.5	Analytical Results of Quarterly Groundwater Monitoring	12
	3.6	Quality Assurance Program	14
4.0	Closu	ıre Request and Final Actions	17
	4.1	Introduction	17
	4.2	Abatement Activities	17
	4.3	Quarterly Monitoring Activities	17
	4.4	Termination Request	17
	4.5	Final Actions	18

List of Figures

Figure 1	Site Location Map
Figure 2	Topographic Map
Figure 3	Aerial Map
Figure 4	Potentiometric Surface Elevation Map – January 2019
Figure 5	Soil Abatement Area
Figure 6	Monitoring Well Location Map
Figure 7	Benzene Plume Map
Figure 8	Potentiometric Surface Elevation Map – June 2019

Embedded Tables

Site-Specific Soil-to-Groundwater Migration PCL for Benzene
Soil-to-Groundwater Migration PCL for TPH
Soil PCLs for the Southwestern Willow Flycatcher
Groundwater Regulatory Criteria
TPH PCL for Human Ingestion of Groundwater
Annualized Groundwater Flow Rate
Cumulative Groundwater Analytical Results
Quality Assurance Results

List of Appendices

Appendix A Potentiometric Surface Elevation Maps from Quarterly Monitoring Appendix B Laboratory Reports and Chain-of-Custody Documents

1.0 Overview

1.1 Introduction

On behalf of Hilcorp Energy Company (Hilcorp), Timberwolf Environmental, LLC (Timberwolf) presents this report documenting soil and groundwater abatement, groundwater monitoring activities, and a request for regulatory site closure at Kaufman No. 1 (Site). The Site is located approximately 9.1 miles north of Farmington in San Juan County, New Mexico (Figures 1-3).

1.2 Site Description and Environmental Setting

The Site is situated on Federal land (managed by the Bureau of Land Management (BLM)) and is immediately east of the La Plata River (Figures 2 and 3). The Site is comprised of approximately 1 acre, all of which is located within the La Plata River flood plain and adjacent to riparian zones and wetlands.

The Site has been temporarily abandoned following a release in November 2018. All equipment has been taken out of service including storage tanks, separators, and a glycol dehydrator. Other surface equipment at the Site includes a wellhead and gas meter.

The Site is situated in a rural area and surrounding land use is predominantly recreational use and oil and gas production. According to the U.S. Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS), the Site soil series is identified as of Walrees loam, 0 to 2 percent slope. This soil series consist of a loam underlain by stratified gravelly sand; native salinity is very slightly saline to moderately saline (2.0 to 8.0 millimhos per centimeter (mmhos/cm)).

An unnamed intermittent stream located approximately 500 feet (ft) south of the Site empties into the La Plata River flood plan and has deposited sufficient sand to form a deltaic feature. This feature extends north to within 100 ft of the Site and is visible on aerial photographs (e.g., Figure 3) and is characterized by sparse vegetation, most pronounced in the understory.

The average elevation at the Site is approximately 5,537 feet above mean sea level. Site topography is relatively flat with a slight dip west, toward the La Plata River.

1.3 Site Geology and Hydrogeology

Site geology consists of 0.5 ft of silt, underlain by approximately 3.5 ft of firm clay. Beneath the clay lies a groundwater sand which is comprised of medium to very coarse sand; sand becomes coarser with depth and contains rock inclusions ranging in size from pebbles to cobbles.

During the groundwater assessment and installation of monitor wells, the shallow groundwater aquifer was at full capacity and groundwater was typically encountered at 4.5 ft below ground surface (bgs). However, weathered petroleum hydrocarbon, consistent with a historical release,

were observed within the saturated zone at 9.0 ft bgs. This indicates that the aquifer may fluctuate seasonally and/or is influenced by drought.

The La Plata River is situated along the western edge of the Site and appears to be in communication with groundwater. The excavation dug during the initial spill response extended into the groundwater sand and is in direct communication with Site groundwater.

The potentiometric surface elevation (PSE) map created during the groundwater assessment conducted in January 2019 revealed the natural direction of groundwater flow to be west-southwest, towards the La Plata River (Figure 4).

1.4 Site History

On 11/16/18, approximately 8 barrels (bbl) of oil and 10 bbl of produced water was released from the storage tank. Enduring Resources was the operator of record at the time of the release; Hilcorp assumed operations of the Site on or about December 1, 2018.

After Hilcorp assumed operations, the well was temporarily abandoned. All surface equipment within the tank battery was removed, and impacted soil within the battery was excavated and transported to off-site disposal. The excavation was primarily along the eastern and southern portion of the tank battery. Initial soil abatement included an excavation approximately 50 ft by 60 ft with a depth ranging from 1 ft to 5 ft bgs. A safety fence was constructed along the perimeter of the excavation.

To delineate impacted groundwater, six groundwater monitoring wells (i.e., MW1 – MW6) were installed in January 2019. Groundwater delineation is documented in Timberwolf's Stage 1 Abatement Plan (pp. 12-14), dated 06/17/19.

Subsequent soil abatement activities were conducted in November 2019. Abatement included excavating and disposal of impacted soil in and around the initial excavation (i.e., former tank battery). Soil exceeding soil-to-groundwater migration criteria and soil exceeding the ecological protective concentration limits (PCLs) was excavated and removed from the site. All excavation activities were completed on 11/08/19. The excavation was backfilled following confirmation sample and analysis. Soil abatement is documented in Timberwolf's *Stage 2 Abatement Plan* (pp. 19-21), dated 01/03/20.

In November 2019, Timberwolf began quarterly groundwater monitoring at the Site. The monitoring included evaluation of Site groundwater and a hydrological assessment of Site groundwater and its relationship to the La Plata River. Consecutive quarterly monitoring was conducted from November 2019 (i.e., 4Q19) through September 2021 (i.e., 3Q21).

On 08/11/20, Timberwolf conducted an additional groundwater investigation at the Site. The purpose of the investigation was to determine if a residual groundwater plume was present between MW1 and MW5. To evaluate the area of concern, a groundwater sample was collected by installing a temporary sampling point in lieu of proposed MW7. Analytical results revealed that all

constituents of concern (COCs) were below regulatory criteria. Findings of the additional groundwater investigation are documented in Timberwolf's *Status Report* – 3^{rd} *Quarter 2020*, dated 09/20/20.

Other assessment and characterization activities included a wetlands investigation/delineation and threatened and endangered species surveys. The work conducted at the Site is documented in the following reports:

- Site Characterization Report and Stage 1 Abatement Plan, dated 06/18/19
- Wetland Delineation (Revised), dated 10/03/19
- Stage 2 Abatement Plan, dated 01/03/20
- *Status Report 1st Quarter 2020,* dated 04/28/20
- Status Report 2nd Quarter 2020, dated 06/19/2020
- Status Report 3rd Quarter 2020, dated 09/20/2020
- Status Report 4th Quarter 2020, dated 11/25/2020
- Status Report 1st Quarter 2021, dated 01/20/21
- Status Report 2nd Quarter 2021, dated 07/01/21
- Status Report 3rd Quarter 2021, dated 10/29/21.

1.5 Soil Assessment

In July 2019, Timberwolf conducted soil assessments to delineate impacts and characterize the vadose zone. The assessment evaluated soil-to-groundwater migration pathways and ecological risks to threatened and endangered species (i.e., Southwestern willow flycatcher).

The assessment included collection and analysis of approximately 40 soil samples from depth ranging from the surface to 4.5 ft bgs. The samples were analyzed for TPH and/or BTEX. The vadose zone and ecological assessment revealed that additional soil abatement was required at the excavation base and sidewalls to protect groundwater and/or meet ecological PCL.

Vadose zone and ecological soil assessments are documented in Timberwolf's *Stage 2 Abatement Plan* (pp. 14-18), dated 01/03/20.

1.6 Soil Abatement

Initial soil abatement was conducted during 4Q18, immediately following the release and prior to conducting the Site characterization. Subsequent soil abatement activities were conducted after Site characterization and soil delineation, in November 2019. The subsequent abatement included excavating and disposal of impacted soil in and around the initial excavation (i.e., former tank battery). Soil exceeding soil-to-groundwater migration criteria and soil exceeding the ecological

protective concentration limits (PCLs) was excavated and removed from the site.

Impacted soil was excavated and transported to Industrial Ecosystems, Inc. (IEI) for commercial disposal. The final excavation dimensions were approximately 105 ft long by 65 ft wide with an average depth of 4.5 ft bgs. The subsequent soil abatement removed approximately 784 cubic yards of soil which exceeded soil-to-groundwater migration criteria and/or soil exceeding ecological PCLs.

Soil abatement activities were completed on 11/08/19. Twenty (20) confirmation samples were collected from the abatement area to ensure that soil exceeding remedial targets had been removed from the Site prior to backfilled. The soil abatement area is depicted in Figure 5. Soil abatement activities are documented in Timberwolf's *Stage 2 Abatement Plan* (pp. 19-21), dated 01/03/20.

1.7 Groundwater Assessment

The groundwater assessment was conducted in January 2019 and included installation of six 2-inch monitor wells across the Site. Monitor Well 1 (i.e., MW1) was installed immediately adjacent to the point of release. All other wells (i.e., MW2 through MW6) were installed near the perimeter of the Site for horizontal delineation of groundwater constituents. A monitor well location map is provided in Figure 6.

The groundwater assessment revealed the following:

- COCs in Site groundwater included: benzene, total dissolved solids (TDS), and sulfate
- MW1 was impacted by benzene; the benzene plume was horizontally delineated
- Groundwater flow across the Site was to the west-southwest, towards the La Plata River
- Additional assessment was required to determine if TDS and sulfate concentrations observed in MW1 were a result of the release or is a native feature of Site groundwater.

The benzene plume is shown in Figure 7. The groundwater assessment is documented in Timberwolf's *Site Characterization Report and Stage 1 Abatement Plan* (pp. 12-14), dated 06/17/19.

The initial groundwater assessment revealed elevated TDS and sulfate in a sample collected from MW1. In June 2019, additional groundwater assessments was conducted to determine if the elevated TDS and sulfate was native to the Site or a result of the release. Groundwater samples were collected from MW1 and MW3, which is hydrologically upgradient from MW1. Both samples were analyzed for chloride, sulfate, and TDS. Analytical results revealed that salinity in Site groundwater is consistent between samples collected from the center of the plume (i.e., MW1) and the sample collected hydrologically upgradient from the plume (i.e., MW3). The additional groundwater assessment is documented in Timberwolf's Stage 2 Abatement Plan (pp. 22-23), dated 01/03/20.

In August 2020, an additional groundwater investigation was conducted to determine if a residual groundwater plume was present between MW1 and MW5. The groundwater sample was collected by installation of a temporary sample point. The sample was analyzed for BTEX.

Analytical results revealed that all constituents of BTEX were below regulatory criteria. The additional groundwater investigation is documented in Timberwolf's *Status Report* – 3^{rd} *Quarter* 2020 (pp. 5), dated 09/30/20.

1.8 Groundwater Abatement

Groundwater abatement occurred between the initial soil abatement and the subsequent soil abatement (i.e., November 2018 through November 2019). The initial soil abatement consisted of excavating impacted soil which extended into the upper groundwater bearing unit encountered at approximately 4.5 ft bgs.

Groundwater filled the excavation and was subjected to the high evaporation potential the arid San Juan Basin climate provides (approximately 9 inches per month evaporation during the warm season and approximately 78 inches annually). Since benzene is mobile and hydrophilic, benzene was transported to the open excavation and subjected to volatilization and ultimately ultraviolet degradation through this evaporation process. The high evaporation rate is corroborated by the June 2019 PSE map which depicts the abrupt change in groundwater flow direction towards the excavation (Figure 8).

Groundwater abatement is additionally evidenced by the reduction in benzene concentration in MW1, decreasing from 0.074 milligrams per liter (mg/L) on 01/18/19 to less than 0.001 mg/L on 10/09/19.

2.0 COCs, Remedial Targets, and Closure Criteria

2.1 Introduction

The Site in under the jurisdiction of the New Mexico Oil Conservation Division (NMOCD) and is subject to the regulations provided under New Mexico Administrative Code (NMAC) 19.15.30, *Remediation*. The constituents of concern (COCs) for the Site, applicable remedial targets for soil and groundwater, and Site closure criteria are presented below.

2.2 COCs

Based on the Site characterization, which is documented in Timberwolf's *Site Characterization Report and Stage 1 Abatement Plan* (pp. 7-11), dated 06/17/19, the Site's COCs for soil included TPH and BTEX.

The groundwater assessment, documented in Timberwolf's *Site Characterization Report and Stage 1 Abatement Plan* (pp. 12-14), dated 06/17/19, revealed that the COC for Site groundwater is benzene.

2.3 Remedial Targets for Soil

Timberwolf developed site-specific criteria for vadose zone soil which are protective of groundwater as required under NMAC 19.15.30.9, *Abatement Standards and Requirements*. Additionally, ecological criteria which is protective of area threatened and endangered species is presented.

Groundwater Protection Criteria

In accordance with NMAC 19.15.30.9 (A), samples impacted by petroleum hydrocarbons from the base and sidewalls of the initial excavation were analyzed for synthetic precipitation leaching procedure (SPLP) to develop a site-specific soil-to-groundwater migration criteria which is protective of groundwater which may be used for human consumption. SPLP is an Environmental Protective Agency (EPA) laboratory method (i.e., Solid Waste SW-846; Test Method 1312) designed to determine the leachability and mobility of both organic and inorganic constituents in liquids, soil, and waste.

The SPLP benzene results were compared to the groundwater regulatory criteria presented in Table 4 of this report. If the SPLP results of a soil sample was lower than the groundwater regulatory criteria, then the constituent concentration from that sample is protective of groundwater. Analytical results of the SPLP benzene and corresponding BTEX results are presented in Table 1 below.

Table 1. Site-Specific Soil-to-Groundwater Migration PCL for Benzene

	Date	SPLP	Vola	Total BTEX			
Sample ID		Benzene (mg/L)	В	Т	E	х	(mg/kg)
EB3	07/11/19	0.12	6.2	17	35	410	468.2
ESW3 2.5-3.5'	07/11/19	0.0072	0.67	< 0.24	4.7	27	32.37
ESW4 2.5-3.5'	07/11/19	< 0.001	0.53	0.14	2.4	12	15.07
Groundwater Regulatory Criteria		0.005	-		-	-	

BTEX - benzene; toluene; ethylbenzene; xylene

SPLP - synthetic precipitation leaching procedure

mg/kg - milligrams per kilograms

mg/L - milligrams per liter

The SPLP results reveal that soil concentrations from the vadose zone which have a benzene concentration of 0.53 mg/kg or less do not pose a risk of leaching and percolating into underlying groundwater. Therefore, the site-specific soil protective concentration limit (PCL) for benzene is 0.53 mg/kg.

To evaluate the threat to groundwater posed by total petroleum hydrocarbons (i.e., TPH), soil which had a TPH concentration that exceeded the NMOCD regulatory limit for the Site of 100 mg/kg were analyzed using the Texas Commission on Environmental Quality (TCEQ) Method 1006 ("Method 1006"). Method 1006 is a hydrocarbon fractionation analysis which speciates hydrocarbon chains into aliphatic and aromatic hydrocarbons with much shorter chain intervals than the EPA SW-846 Method 8015 which separates petroleum hydrocarbon chains into the following ranges: gasoline range organics (GRO) C6-C10; diesel range organics (DRO) C10-C28; motor oil range organics (ORO) C29-C35.

The results of Method 1006 analysis are compared to TCEQ soil-to-groundwater migration criteria to determine if soil TPH concentrations poses a risk to underlying groundwater. The TCEQ has established protective concentrations limits (PCL) for aliphatic and aromatic chains which protect underlying groundwater for human consumption. TCEQ soil criteria for the soil-to-groundwater migration pathway is presented in Table 2 below.

Table 2. Soil-to-Groundwater Migration PCL for TPH

Constituent	TPH PCL ¹ (mg/kg)									
	C ₆	C ₆₋₈	C ₇₋₈	C ₈₋₁₀	C ₁₀₋₁₂	C ₁₂₋₁₆	C ₁₆₋₂₁	C ₂₁₋₃₅		
Aliphatics	170	420		3,600	25,000	1,000,000	1,000,000			
Aromatics			20.0	65.0	100	200	470	3,700		

PCL - protective concentration limit

TPH - total petroleum hydrocarbons

¹ – PCL derived from the Texas Risk Reduction Program (TRRP)

 $mg/L-milligrams\ per\ liter$

-- - no established criteria

Ecological Protection Criteria

According to the BLM and the United States Fish and Wildlife Services (USFWS), the area surrounding the Site is critical habitat for the Southwestern willow flycatcher (*Empidonax traillii extimus*). The Southwestern willow flycatcher ("flycatcher") is listed as a USFWS endangered species.

A review of toxicological databases revealed the following protective concentration limits PCLs for the flycatcher.

Table 3. Soil PCLs for the Southwestern Willow Flycatcher

Charle	Volatile Organic Compound (mg/kg) ¹						
Specie	В	Т	E	x			
PCL for the Southwestern willow flycatcher	26.36	25.98	97.1	7.7			

PCL - protective concentration limit

BTEX - benzene; toluene; ethylbenzene; xylene

mg/kg - milligrams per kilograms

Soil in the upper 2 ft with BTEX concentrations that exceed the PCLs presented in Table 3 pose an ecological risk to the Southwestern willow flycatcher and require mitigation or abatement.

2.4 Remedial Targets for Groundwater

Human health standards for usable groundwater (i.e., TDS less than 10,000 milligrams per kilograms (mg/L)) are established under NMAC 20.6.2§3103. Additionally, this statute provides standards for domestic water supply. These criteria provide standards for a variety of constituents, including: metals, anions, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), certain radioactive isotopes, salinity, and pH.

Based on process knowledge, a constituent list prepared for the Site includes:

- VOCs
- SVOCs
- arsenic, barium, cadmium, chromium, mercury, lead, selenium, and silver (i.e., Resource Conservation and Recovery Act (RCRA)-8 metals)
- anions (i.e., chloride and sulfate)
- TDS
- pH.

The regulatory criteria for human health or domestic water supply for these constituents are provided in Table 4.

^{1 -} Limit established by Los Alamos National Laboratory

Table 4. Groundwater Regulatory Criteria

Constituent	Regulatory Criteria (mg/L)
Metals	
Arsenic	0.10 ¹
Barium	1.00 ¹
Cadmium	0.01 ¹
Chromium	0.05 ¹
Lead	0.05 ¹
Mercury	0.0002 ¹
Selenium	0.05 ¹
Silver	0.05 ¹
VOCs	
Benzene	0.01 ¹
Toluene	0.75 ¹
Ethylbenzene	0.75 ¹
Xylenes	0.62 ¹
PAHs (Total Naphthalene)	0.03 ¹
SVOCs	
Phenols	0.005 ²
General Water Chemistry	
Total Dissolved Solids	1,000²
Chloride	250 ²
Sulfate	600 ²
pH (units – s.u.)	6 – 9 ²

¹New Mexico human health standard

²New Mexico Standard for domestic water supply wells

mg/L - milligrams per liter

s.u. - standard units

VOCs - volatile organic compounds

SVOCs – semi-volatile organic compounds

The state of New Mexico has not established human health criteria for TPH in groundwater. Therefore, Timberwolf utilized the TCEQ Texas Risk Reduction Program (TRRP) groundwater ingestion pathway as a PCL for the Site. TPH PCLs for groundwater are presented in Table 5 below.

Table 5. PCL for Human Ingestion of Groundwater

Constituent	PCL for Human Ingestion ¹ (mg/L) ¹
TPH (C6-C12)	0.98
TPH (C12-C28)	0.73
TPH (C28-C35)	0.73

PCL – protective concentration limit TPH – total petroleum hydrocarbons

mg/L – milligrams per liter

¹ – PCL derived from the Texas Risk Reduction Program (TRRP)

2.5 Site Closure Criteria

As specified in NMAC 19.15.30.9 *Abatement Standards and Requirements*, the following site closure conditions are applicable for the Site and must be completed prior to submitting a abatement completion report:

- Abate the vadose zone so that water contaminants in the vadose zone will not, with reasonable probability, contaminate groundwater or surface water
- Abate groundwater with TDS of less than 10,000 mg/L to the standards provided in Table 4 of this report
- Conduct eight consecutive quarterly groundwater monitoring events in which COCs at all sampling stations (i.e., MW 1 MW6) are below remedial targets for groundwater (i.e., BTEX concentrations in Table 4).

3.0 Site Monitoring

3.1 Introduction

Quarterly groundwater monitoring began October 2019. Eight consecutive quarters of groundwater monitoring have been completed at the Site. Prior to each event, the OCD District 3 Office was provided with 2-day advance notice of all field activities. Gauging and sampling methodology, as well as results, are documented below.

3.2 Groundwater Gauging Methodology

Prior to sample collection, well caps were removed to allow water within each well to equilibrate. Each well was gauged to determine depth to water and presence or absence of phase-separated hydrocarbons (PSH) using an oil-water interface probe capable of measuring to the nearest one-hundredth foot. The interface probe and measurement tape were properly decontaminated between each well using deionized water and Alconox®. Additionally, the La Plata River water elevation was measured relative to two steel stakes. On 11/19/19, NCE Survey, Inc. of Farmington, NM surveyed the elevations of tops of each monitor well casing and the two steel stakes. Depths to groundwater were calculated for each well during each gauging event; additionally, the depth to the river water was calculated.

3.3 Results of Gauging Data and Hydrological Assessment of the La Plata River

PSH was not observed at any monitor station during any of the eight monitoring events. PSE maps were prepared from gauging data collected. The PSE maps reveal groundwater flow is to the west-southwest, towards the La Plata River. PSE maps for each quarterly monitoring event provided in Appendix A.

Groundwater flow rates were calculated from quarterly gauging data. The flow rates are presented in the following Table 6 below.

Flow Rate **Monitoring Event** (ft/yr) 4Q19 25.0 1Q20 32.6 2Q20 38.7 3Q20 38.7 4Q20 48.5 1Q21 21.2 2Q21 34.1 3Q21 19.7

Table 6. Annualized Groundwater Flow Rate

ft/yr - feet per year

The PSE maps also depict La Plata River elevation relative to the two steel stakes. In each quarterly PSE map, groundwater flow was toward the La Plata River. This suggests that seasonal changes in hydrology (e.g., snow melt, flooding, drought, etc.) do not appear to influence the trajectory of groundwater, only the flow rate as shown in Table 6 above.

3.4 Groundwater Sample Methodology

Except for one monitoring event (i.e., 3Q21), all six sampling stations (i.e., MW1 – MW6) were sampled using the EPA low-flow technique. A submersible pump was placed within the screened interval of each well. Water was extracted from each well and pumped through a flow-through cell equipped with a YSI probe. Field water quality parameters were analyzed and recorded, which included: dissolved oxygen, conductivity, pH, temperature, and oxidation reduction potential (ORP). After water quality parameters stabilized, the YSI flow-through cell was bypassed, and samples were collected directly into laboratory-provided sample containers.

During the 3Q21 groundwater monitoring event, a YSI malfunction precluded using the EPA low-flow sampling technique. Therefore, during this event, the six sampling stations were sampled by purging three well volumes prior to sampling; this sample method is also an EPA approved technique for groundwater sampling. The depths to water measurement for each well were subtracted from the well total depth to determine to length of the water column and well volumes for each well. A minimum of three times each well volume was extracted from each well prior to sample collection. Dedicated tubing and a submersible pump were placed within each well's screened interval and used to produce water from each well.

Groundwater samples were collected immediately following well purging in laboratory provided sample containers with appropriate preservative. Sample jars were labeled, stored on ice, and transported under proper chain-of-custody protocol to Hall Environmental Analytical Laboratories, Inc. (HEAL) in Albuquerque, New Mexico and Pace Analytical (Pace) of Mt. Juliet, Tennessee for chemical analysis.

3.5 Analytical Results of Quarterly Groundwater Monitoring

Groundwater samples submitted to HEAL were analyzed for the following constituents: benzene, toluene, ethylbenzene, and xylenes (BTEX); samples submitted to Pace were analyzed for TPH by Method TX 1005. Analytical methods are documented on the attached laboratory reports in Appendix B. Cumulative analytical results for the eight consecutive quarters of groundwater monitoring are presented in Table 7 below.

Table 7. Cumulative Groundwater Analytical Results

MW-2 MW-	Sample		Volat	ile Organic C	ompounds	(mg/L)	TPH (mg/L)		
MW-1 MW-1 MW-1 MW-2 MW-1 MW-2 MW-2 MW-2 MW-2 MW-2 MW-1 MW-2 MW-3 MW-4		Date	В	Т	E	х			
MW-1 MW-1 MW-1 MW-1 MW-1 MW-2 MW-2 MW-2 MW-3 MW-2 MW-3 MW-3 MW-3 MW-3 MW-3 MW-3 MW-4		10/09/19	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW-1 MW-1 MW-2 MW-2 MW-2 MW-3 MW-3 MW-3 MW-3 MW-3 MW-3 MW-4		01/16/20	< 0.001	< 0.001	< 0.001	< 0.002	< 0.60	< 0.60	< 0.60
MW-1 11/05/20		04/09/20	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.60	< 0.60	< 0.60
MW-3 MW-3 MW-3 MW-3 MW-3 MW-3 MW-3 MW-4 MW-6 MM-6	NA\A/ 1	07/02/20	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.600	< 0.600	< 0.600
MW-3 MW-3 MW-3 MW-3 MW-4	10100-1	11/05/20	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.606	< 0.606	< 0.606
MW-2		01/11/21	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.60	< 0.60	< 0.60
MW-2 MW-2 10/09/19		05/26/21	< 0.001	< 0.001	< 0.001	< 0.002	< 0.60	< 0.60	< 0.60
MW-2 MW-2 MW-2 MW-2 MW-2 MW-3 MW-4		09/09/21	< 0.001	< 0.001	< 0.001	< 0.002	< 0.60	< 0.60	< 0.60
MW-2 MW-2 MW-2 MW-2 MW-2 MW-3 MW-4 MW-4 MW-4 MW-4 MW-4 MW-4 MW-4 MW-4		10/09/19	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW-2 MW-2		01/16/20	< 0.001	< 0.001	< 0.001	< 0.002	< 0.60	< 0.60	< 0.60
MW-2 11/05/20		04/09/20	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.60	< 0.60	< 0.60
MW-3 11/05/20	NAVA/ O	07/02/20	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.600	< 0.600	< 0.600
MW-3 05/26/21	IVIVV-Z	11/05/20	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.600	< 0.600	< 0.600
MW-3 MW-3 MW-4		01/11/21	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.606	< 0.606	< 0.606
MW-4 10/09/19 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.000 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 < 0.60 <		05/26/21	< 0.001	< 0.001	< 0.001	< 0.002	< 0.60	< 0.60	< 0.60
MW-4 MW-4 O1/16/20 < 0.001		09/09/21	< 0.001	< 0.001	< 0.001	< 0.002	< 0.60	< 0.60	< 0.60
MW-3 MW-3 MW-3 MW-3 MW-4		10/09/19	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW-3 MW-3 O7/02/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 11/05/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.6066 < 0.606 < 0.606 O1/11/21 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.606 < 0.606 < 0.606 O5/26/21 < 0.001 < 0.001 < 0.001 < 0.001 < 0.002 < 0.600 < 0.600 < 0.600 O9/09/21 < 0.001 < 0.001 < 0.001 < 0.002 < 0.600 < 0.600 < 0.600 O9/09/10 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 O1/16/20 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 O1/16/20 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.600 < 0.600 O7/02/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 O1/11/21 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 O1/11/21 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 O5/26/21 < 0.001 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 O9/09/21 < 0.001 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 O9/09/21 < 0.001 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 O9/09/21 < 0.001 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600		01/16/20	< 0.001	< 0.001	< 0.001	< 0.002	< 0.60	< 0.60	< 0.60
MW-3 11/05/20		04/09/20	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.60	< 0.60	< 0.60
MW-4 11/05/20	NAVA / O	07/02/20	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.600	< 0.600	< 0.600
MW-4 MW-4	10100-3	11/05/20	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.606	< 0.606	< 0.606
MW-4 MW-4 09/09/21		01/11/21	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.606	< 0.606	< 0.606
MW-4 MW-4		05/26/21	< 0.001	< 0.001	< 0.001	< 0.002	< 0.60	< 0.60	< 0.60
MW-4 MW-4 01/16/20 < 0.001 < 0.001 < 0.001 < 0.002 < 0.60 < 0.60 < 0.60 04/09/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.60 < 0.60 < 0.60 07/02/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 11/05/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 01/11/21 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 05/26/21 < 0.001 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.606 < 0.606 < 0.606 09/09/21 < 0.001 < 0.001 < 0.001 < 0.002 < 0.60 < 0.60 < 0.60		09/09/21	< 0.001	< 0.001	< 0.001	< 0.002	< 0.60	< 0.60	< 0.60
MW-4 MW-4 04/09/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.60 < 0.60 < 0.60 07/02/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 11/05/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 01/11/21 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.606 < 0.606 < 0.606 05/26/21 < 0.001 < 0.001 < 0.001 < 0.001 < 0.002 < 0.60 < 0.60 09/09/21 < 0.001 < 0.001 < 0.001 < 0.002 < 0.60 < 0.60 0 < 0.60		10/09/19	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW-4		01/16/20	< 0.001	< 0.001	< 0.001	< 0.002	< 0.60	< 0.60	< 0.60
MW-4 11/05/20 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 01/11/21 < 0.001 < 0.001 < 0.0015 < 0.606 < 0.606 < 0.606 05/26/21 < 0.001 < 0.001 < 0.001 < 0.002 < 0.60 < 0.60 09/09/21 < 0.001 < 0.001 < 0.001 < 0.002 < 0.60 < 0.60 09/09/21 < 0.001 < 0.001 < 0.001 < 0.002 < 0.60 < 0.60		04/09/20	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.60	< 0.60	< 0.60
11/05/20 < 0.001	NA\A/ A	07/02/20	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.600	< 0.600	< 0.600
05/26/21 < 0.001	IVI V V - 4	11/05/20	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.600	< 0.600	< 0.600
09/09/21 < 0.001 < 0.001 < 0.002 < 0.60 < 0.60		01/11/21	< 0.001	< 0.001	< 0.001	< 0.0015	< 0.606	< 0.606	< 0.606
		05/26/21	< 0.001	< 0.001	< 0.001	< 0.002	< 0.60	< 0.60	< 0.60
Regulatory Criteria 0.01 0.75 0.75 0.62 0.98 0.73 0.73		09/09/21	< 0.001	< 0.001	< 0.001	< 0.002	< 0.60	< 0.60	< 0.60
	Regulator	ry Criteria	0.01	0.75	0.75	0.62	0.98	0.73	0.73

BTEX - benzene, toluene, ethylbenzene, and xylenes

TPH – total petroleum hydrocarbons

mg/L - milligrams per liter

- exceeds regulatory criteria

GRO – gasoline range organics

DRO - diesel range organics

ORO – oil range organics

Volatile Organic Compounds (mg/L) TPH (mg/L) Sample **Date** GRO DRO ORO ID В Т Χ Ε (C6-C12)(C12-C28) C28-C35) 0.0041 < 0.001 < 0.001 < 0.001 10/09/19 0.0041 < 0.001 < 0.001 01/16/20 0.0012 < 0.001 < 0.001 < 0.002 < 0.60 < 0.60 < 0.60 04/09/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.60 < 0.60 < 0.60 07/02/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.600 < 0.600 < 0.600 MW-5 11/05/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.606 < 0.606 < 0.606 01/11/21 < 0.0015 < 0.001 < 0.001 < 0.001 < 0.606 < 0.606 < 0.606 05/26/21 < 0.001 < 0.001 < 0.001 < 0.002 < 0.60 < 0.60 < 0.60 < 0.60 09/09/21 < 0.001 < 0.001 < 0.001 < 0.60 < 0.002 < 0.60 10/09/19 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 01/16/20 < 0.001 < 0.001 < 0.001 < 0.002 < 0.60 < 0.60 < 0.60 04/09/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.60 < 0.60 < 0.60 07/02/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.630 < 0.630 < 0.630 MW-6 11/05/20 < 0.001 < 0.001 < 0.001 < 0.0015 < 0.606 < 0.606 < 0.606 01/11/21 < 0.0015 < 0.642 < 0.001 < 0.001 < 0.001 < 0.642 < 0.642 05/26/21 < 0.001 < 0.001 < 0.001 0.0038 0.644^{J} < 0.60 < 0.60 09/09/21 < 0.001 < 0.001 < 0.001 < 0.002 < 0.60 < 0.60 < 0.60 **Regulatory Criteria** 0.75 0.75 0.62 0.98 0.73 0.73 0.01

Table 7. Cumulative Groundwater Analytical Results (continued)

BTEX - benzene, toluene, ethylbenzene, and xylenes

TPH - total petroleum hydrocarbons

mg/L - milligrams per liter

exceeds regulatory criteria

GRO - gasoline range organics

DRO - diesel range organics

ORO – oil range organics

The analytical results generated form quarterly monitoring reveal that:

- Concentrations of constituents of BTEX in all samples were below regulatory criteria for eight consecutive quarters
- Concentrations of TPH (GRO, DRO, and ORO) were below human ingestion PCLs.

3.6 Quality Assurance Program

To provide quality assurance in laboratory data, Timberwolf collected a field duplicate sample and utilized a Trip Blank during each monitor event. A field duplicated ("Dup") was collected from a monitor well to evaluate laboratory reproducibility. The field duplicate was collected immediately after the monitor well sample to ensure homogeneity between the sample and the field duplicate. The Trip Blank was maintained with the sampling kit to evaluate the potential for in-field contaminations or contaminants encountered traveling to and from the laboratory.

Both the field duplicate and trip blank were analyzed for BTEX. Analytical results are documented in the attached laboratory report provided in Appendix B and summarized in Table 8 below.

Table 8. Quality Assurance Results

Monitoring	Sample ID	Date	V	ı/L)		
Event	Sample ID	Date	В	Т	E	х
	Trip Blank	10/08/19	< 0.001	< 0.001	< 0.001	< 0.002
4010	MW6	10/08/19	< 0.001	< 0.001	< 0.001	< 0.002
4Q19	Dup	10/08/19	< 0.001	< 0.001	< 0.001	< 0.002
	RI	PD	0%	0%	0%	0%
	Trip Blank	01/16/20	< 0.001	< 0.001	< 0.001	< 0.002
4000	MW5	01/16/20	0.0012	< 0.001	< 0.001	< 0.002
1Q20	Dup	01/16/20	0.0016	< 0.001	< 0.001	< 0.002
	RI	PD	28.5%	0%	0%	0%
	Trip Blank	NA	NA	NA	NA	NA
2020	MW5	04/09/20	< 0.001	< 0.001	< 0.001	< 0.002
2Q20	Dup	04/09/20	< 0.001	< 0.001	< 0.001	< 0.002
	RI	PD	0%	0%	0%	0%
	Trip Blank	07/02/20	< 0.001	< 0.001	< 0.001	< 0.0015
2020	MW5	07/02/20	< 0.001	< 0.001	< 0.001	< 0.0015
3Q20	Dup	07/02/20	< 0.001	< 0.001	< 0.001	< 0.0015
	RI	PD	0%	0%	0%	0%
	Trip Blank	11/05/20	< 0.001	< 0.001	< 0.001	< 0.0015
4020	MW5	11/05/20	< 0.001	< 0.001	< 0.001	< 0.0015
4Q20	Dup	11/05/20	< 0.001	< 0.001	< 0.001	< 0.0015
	RI	PD	0%	0%	0%	0%
	Trip Blank	11/05/20	< 0.001	< 0.001	< 0.001	< 0.0015
1Q21	MW5	11/05/20	< 0.001	< 0.001	< 0.001	< 0.0015
IQZI	Dup	11/05/20	< 0.001	< 0.001	< 0.001	< 0.0015
	RI	PD	0%	0%	0%	0%
	Trip Blank	05/26/21	< 0.001	< 0.001	< 0.001	< 0.002
2024	MW5	05/26/21	< 0.001	< 0.001	< 0.001	< 0.002
2Q21	Dup	05/26/21	< 0.001	< 0.001	< 0.001	< 0.002
	RI	OP .	0%	0%	0%	0%
	Trip Blank	09/09/21	< 0.001	< 0.001	< 0.001	< 0.002
2024	MW5	09/09/21	< 0.001	< 0.001	< 0.001	< 0.002
3Q21	Dup	09/09/21	< 0.001	< 0.001	< 0.001	< 0.002
	RI	OP	0%	0%	0%	0%

mg/L - milligrams per liter

BTEX – benzene, toluene, ethylbenzene, and xylenes

NA - not analyzed

RPD – relative percent difference between the sample (i.e., MW5 or MW6) and the duplicate ("Dup")

The acceptable limit for relative percent difference (RPD) between duplicate samples for organic compounds, such as the constituents of BTEX, is 30 percent relative percent difference (i.e., 30% RDP) or less. The RDP for duplicate sample in monitoring events ranged from 0% to 28.5% RDP; the highest RDP was observed during 1Q20. This analysis validates laboratory reproducibility.

Laboratory analysis of Trip Blanks revealed that concentrations of constituents of BTEX were below laboratory detection limits. This analysis indicates that no in-field contamination occurred. [Note: A trip blank was not analyzed for the 2Q20 monitoring event, however, only one sample exceeded laboratory detection limits.]

4.0 Closure Request and Final Actions

4.1 Introduction

The following sections present a summary of abatement activities, results of the quarterly groundwater monitoring, and a request for termination of the abatement plan for the Site.

4.2 Abatement Activities

Soil abatement began during the 4th quarter of 2018 and was completed during the 4th quarter of 2019. Soil which posed a threat to underlying groundwater or the Southwestern flycatcher, an endangered species with suitable habitat along the La Plata River, was abated by removing from the Site for commercial disposal. Soil abatement as required under NMAC 19.15.30.9 (A) has been completed.

Groundwater abatement began during the 4th quarter of 2018 and was completed by October 2019 as demonstrated by the 4Q19 monitoring event. Groundwater abatement as required under NMAC 19.15.30.9 B) has been accomplished.

Surface water was not impacted at the Site, therefore abatement as specified under NMAC 19.15.30.9 (C) is not applicable.

4.3 Quarterly Monitoring Activities

Eight consecutive groundwater monitoring events conducted between 4Q19 and 3Q21 revealed the following:

- Concentrations of benzene, toluene, ethylbenzene, and xylene were below standards presented in NMAC 20.6.2§3103 in all samples
- Concentrations of TPH (i.e., GRO, DRO, and ORO) were below human ingestion PCL in all samples
- The groundwater monitoring events satisfy the requirements of NMAC 19.15.30.9 (D) for site monitoring.

4.4 Termination Request

Hilcorp has successfully completed the standards set forth in NMAC 19.15.30.9, *Abatement Standards and Requirements*, and requests that the director approve this Abatement Completion Report and terminate the abatement plan (AP-0138) for the Kaufman No. 1.

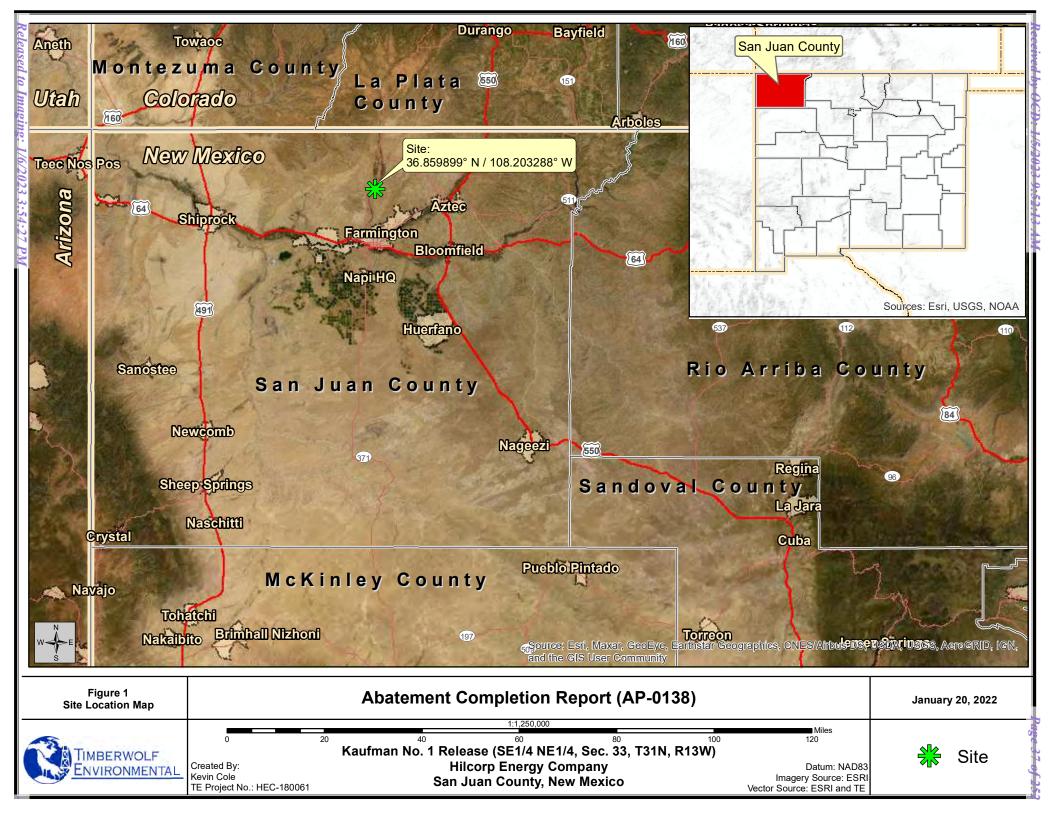
4.5 Final Actions

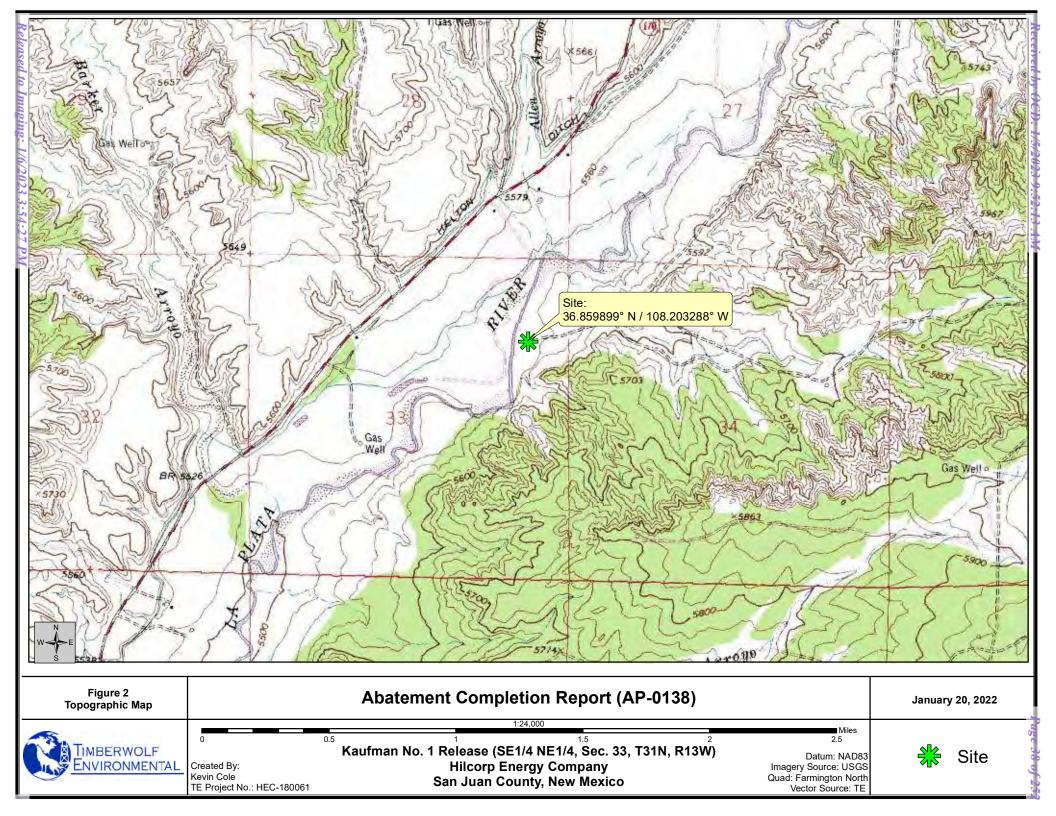
Upon receiving notice that the abatement plan is terminated, Hilcorp will plug and abandon (P&A) all monitor wells at the Site. Plugging reports will be submitted to the Office of State Engineer following P&A activities.

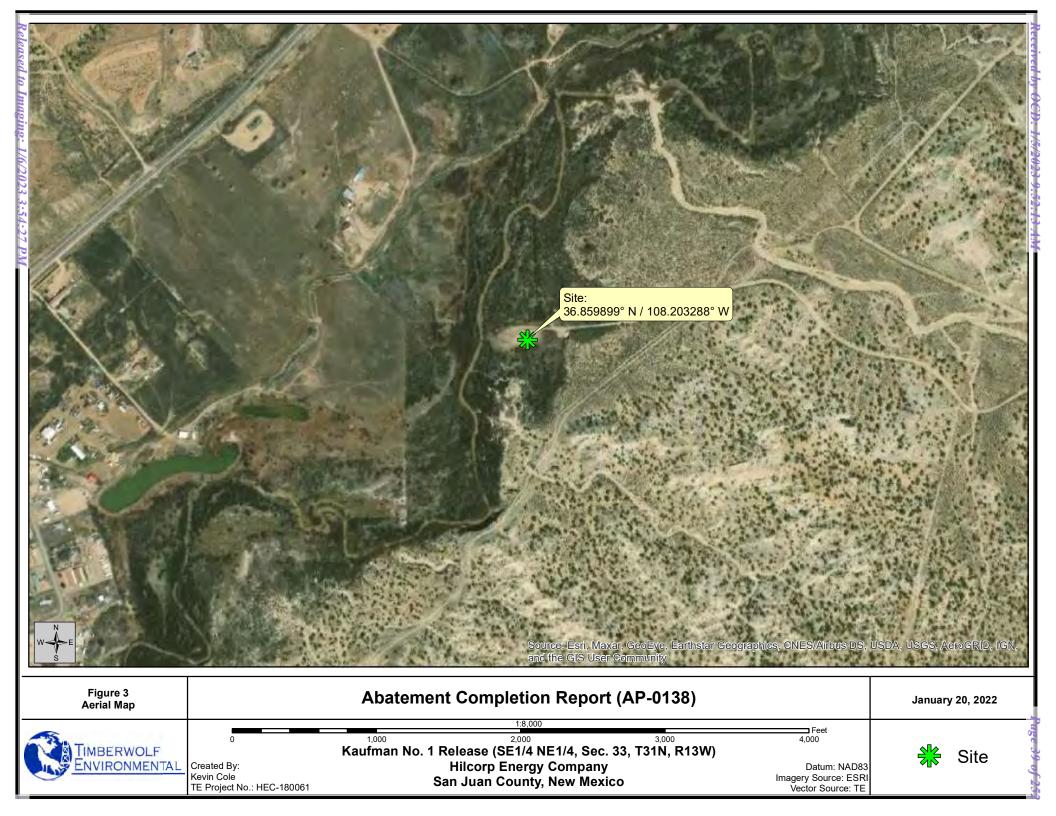


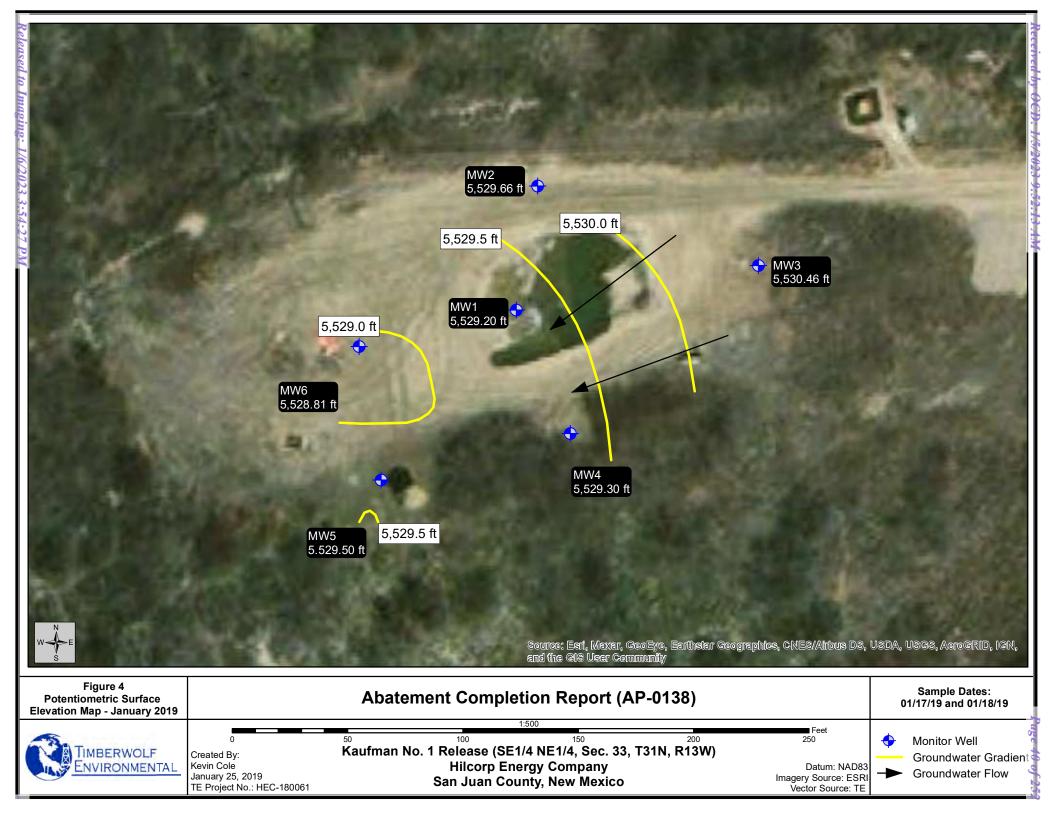
Page 36 of 252

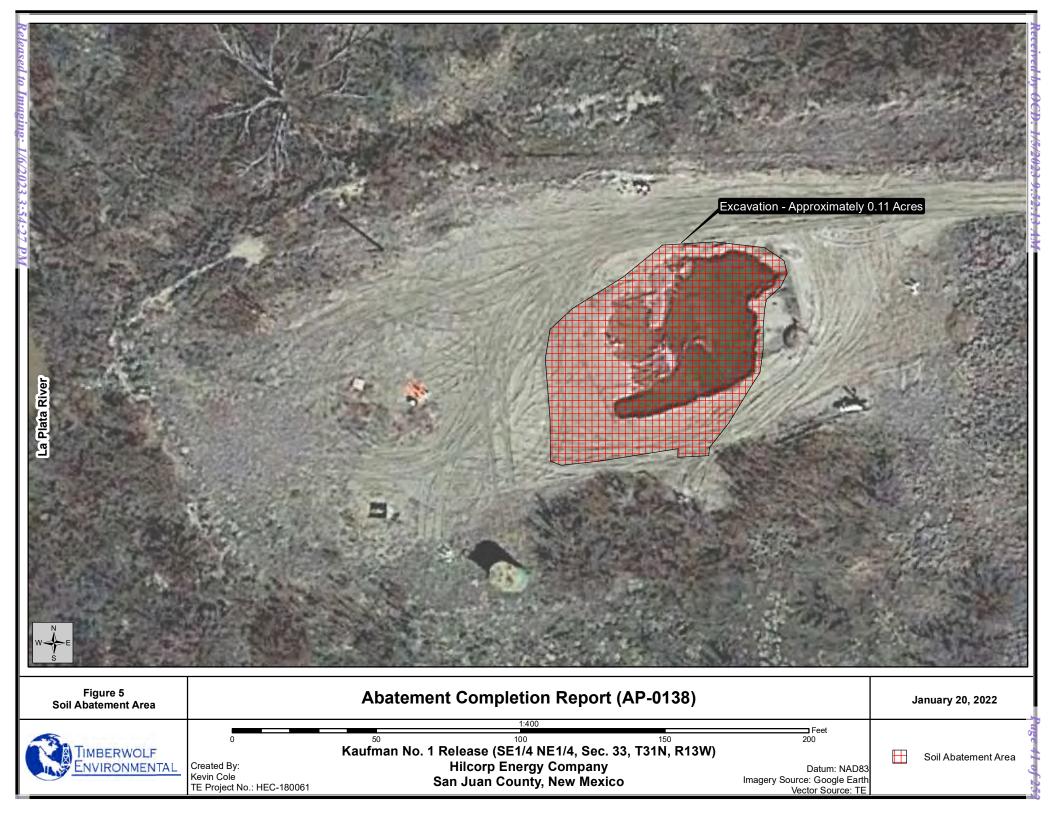
Figures

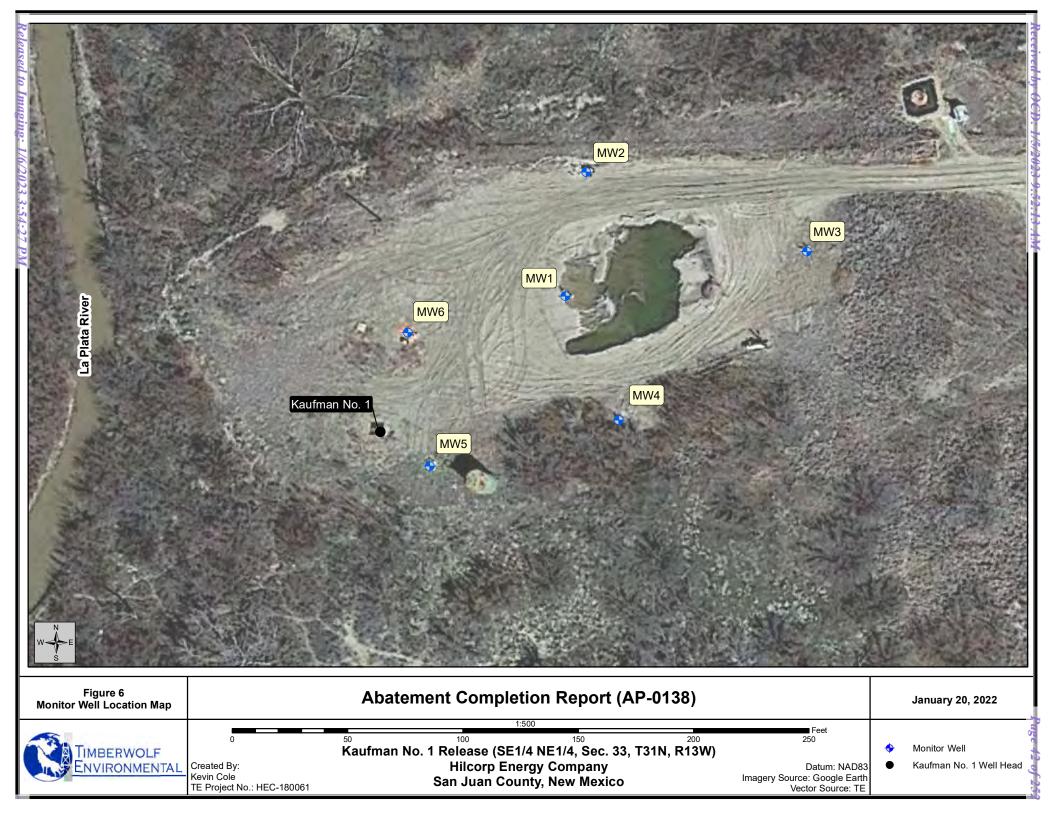


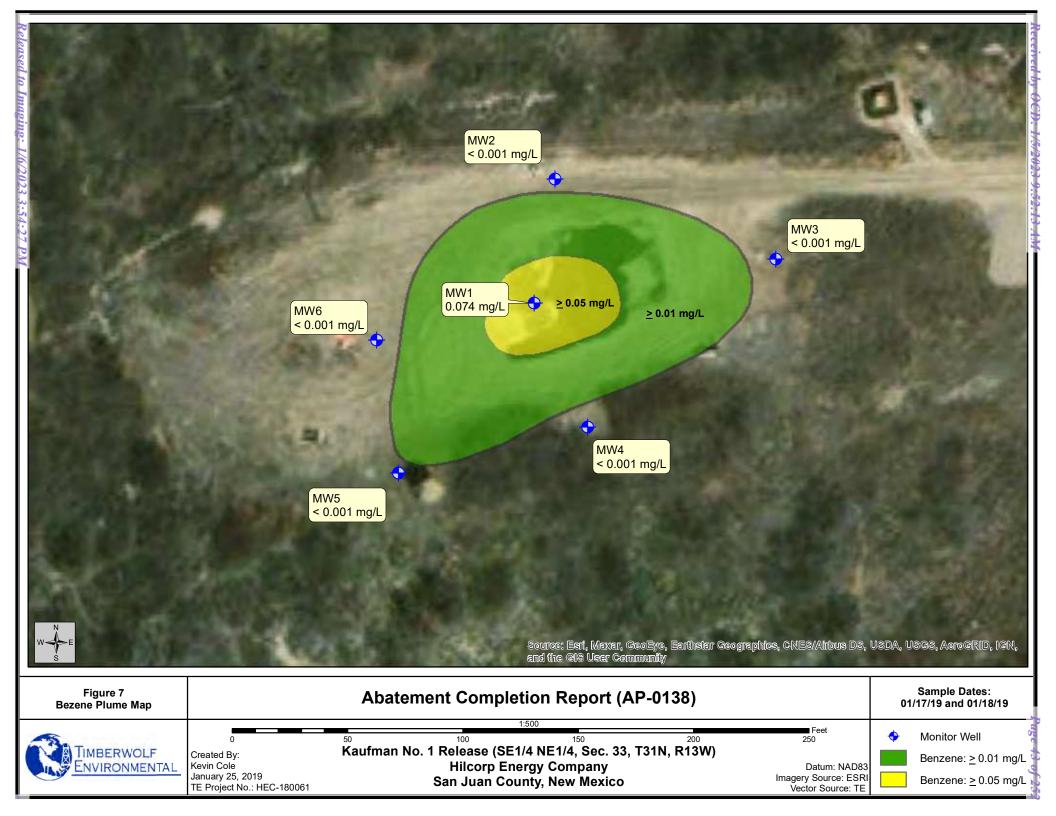


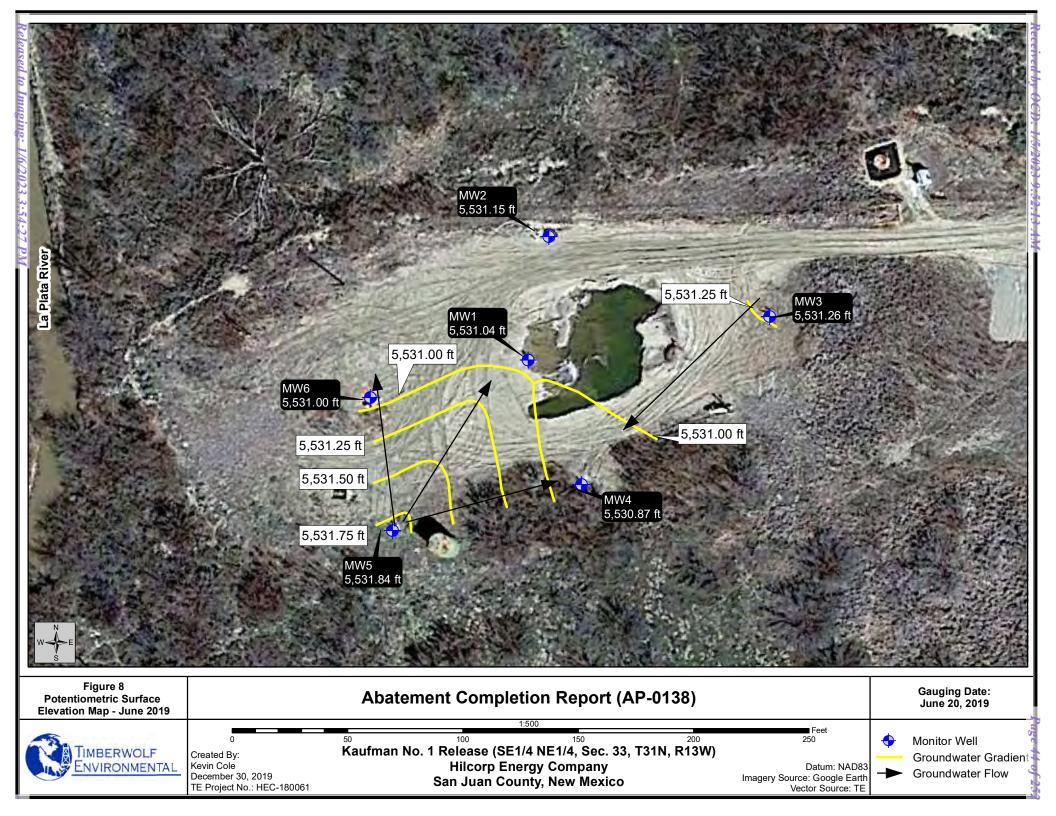


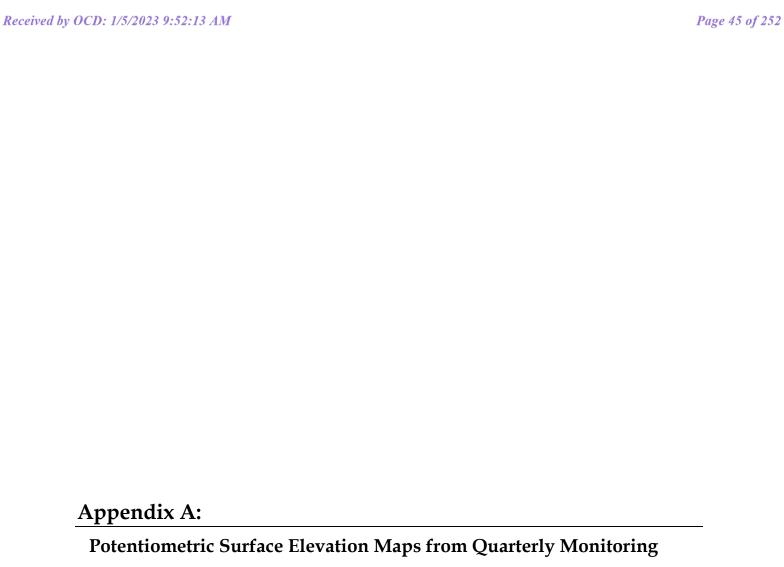


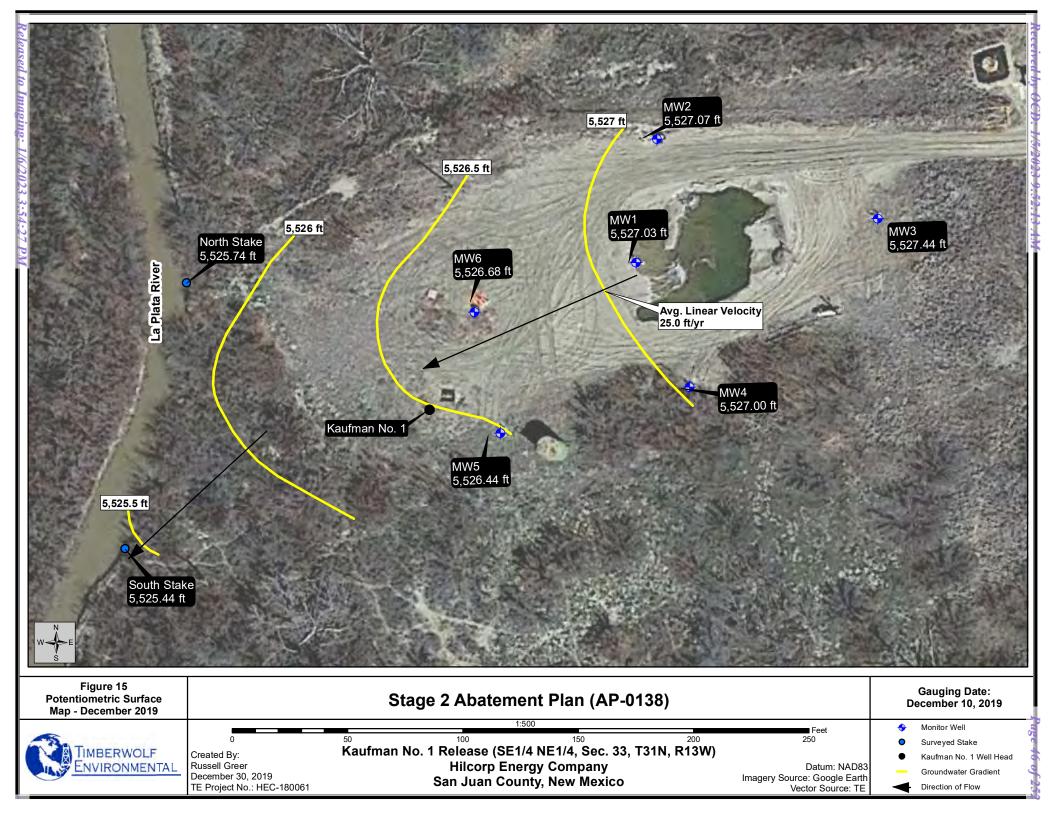


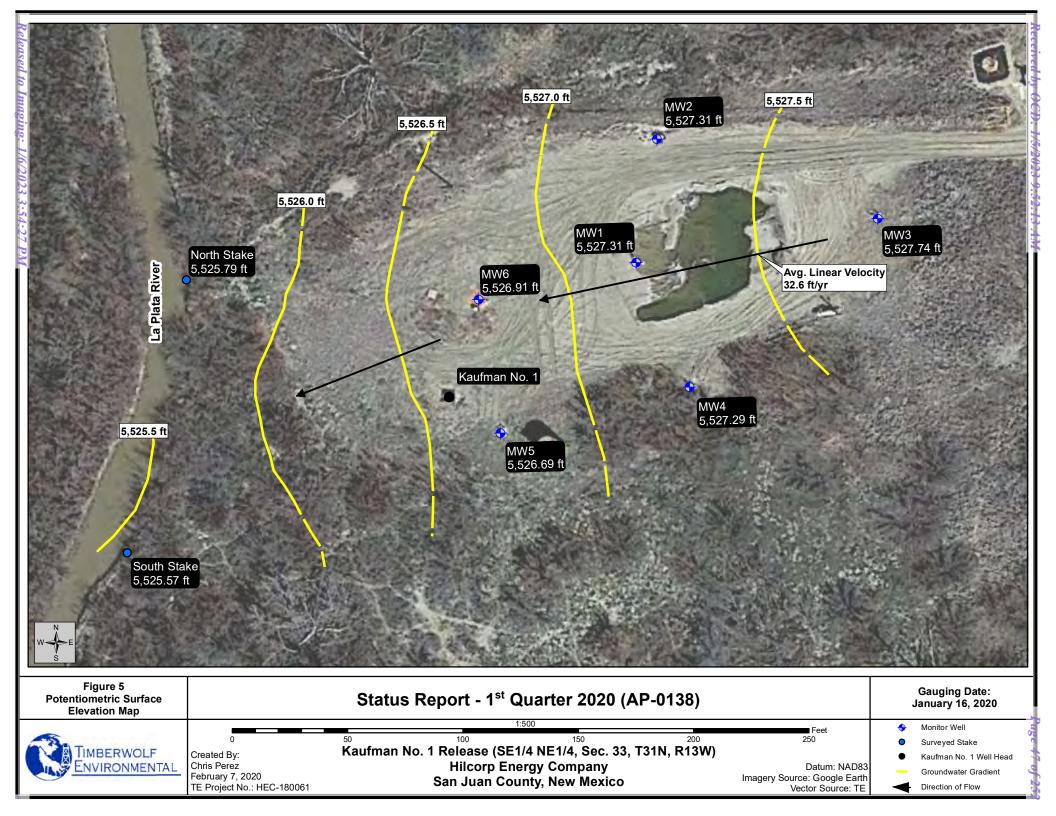


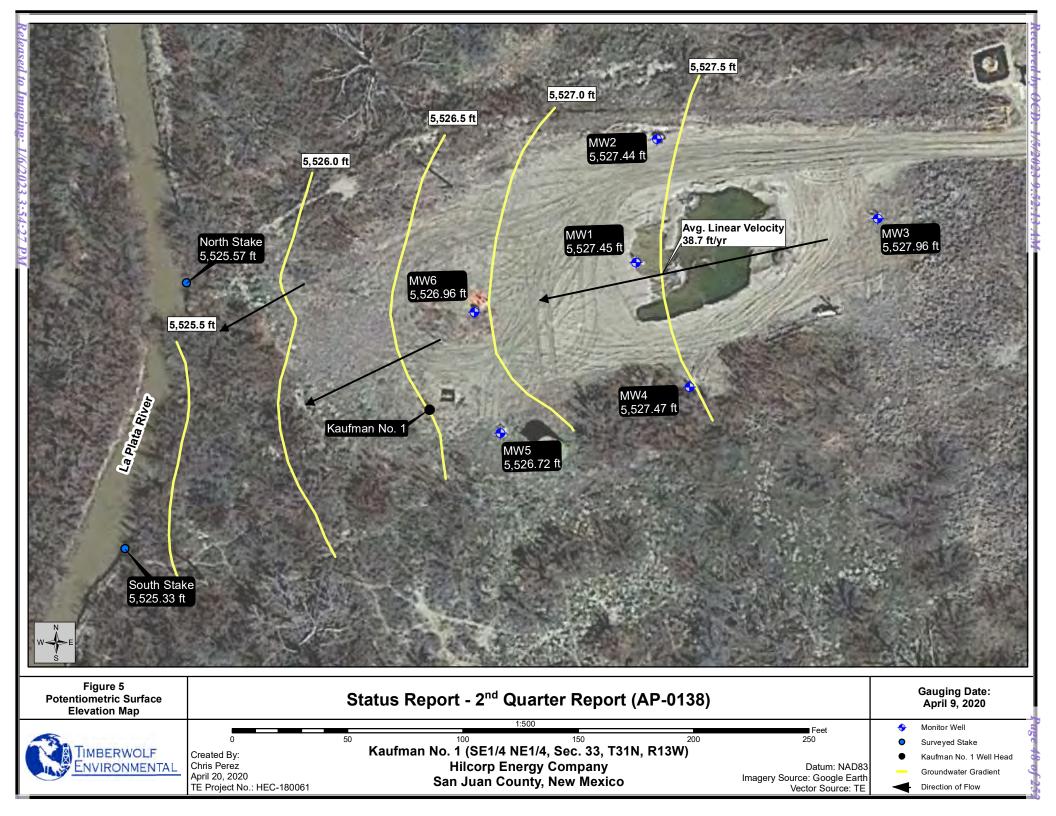


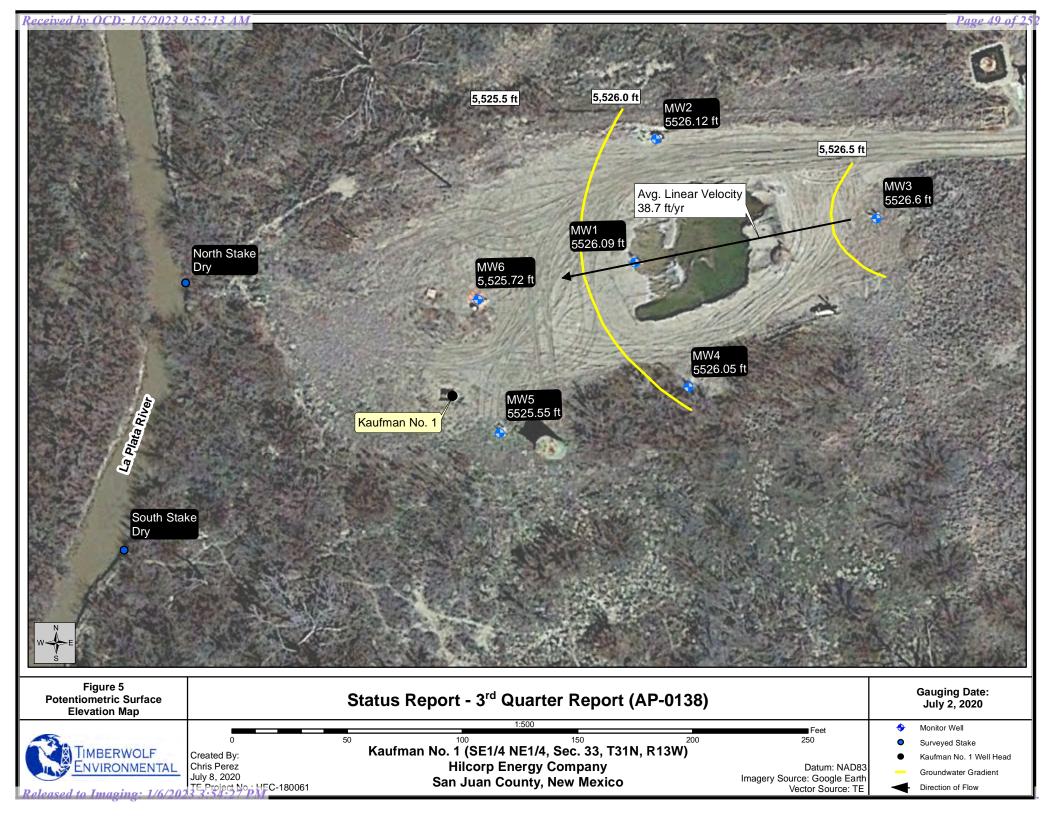


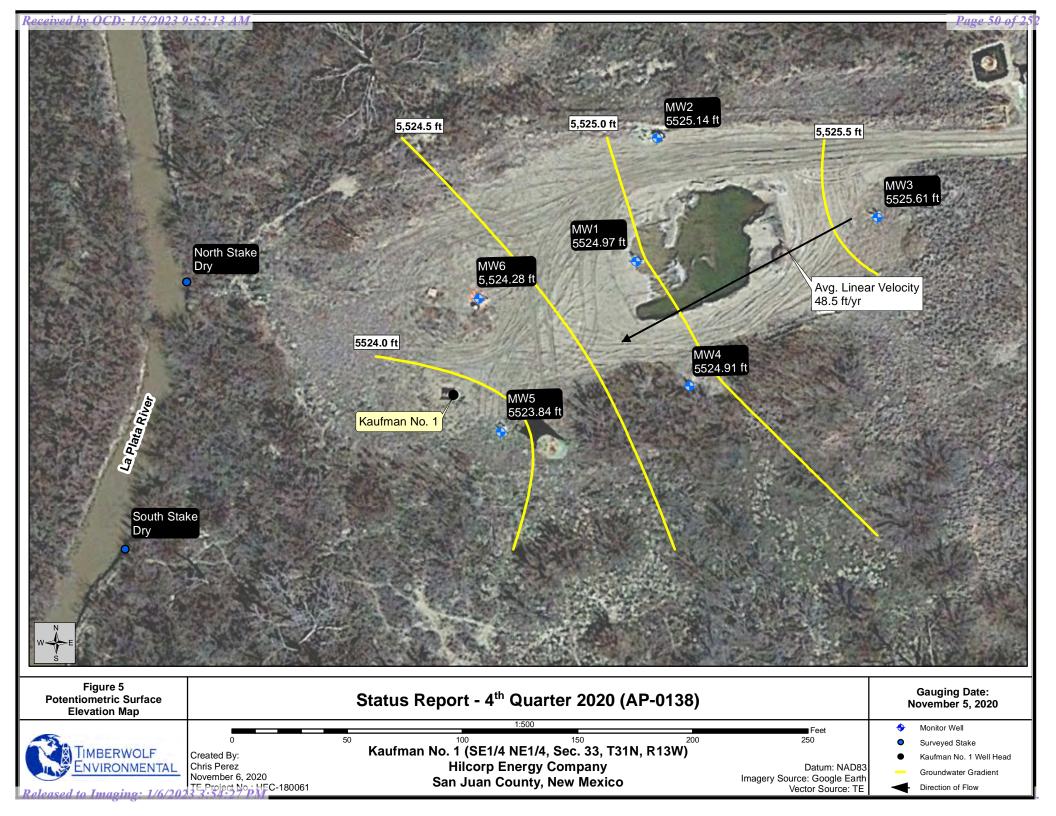


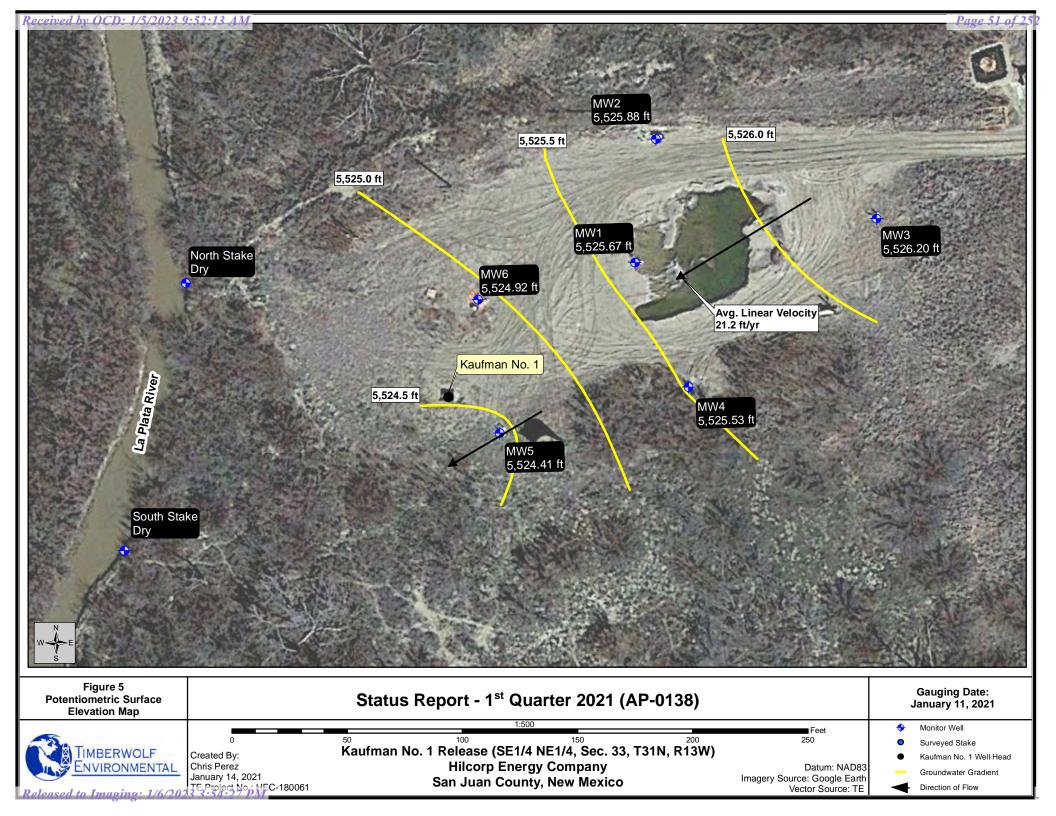


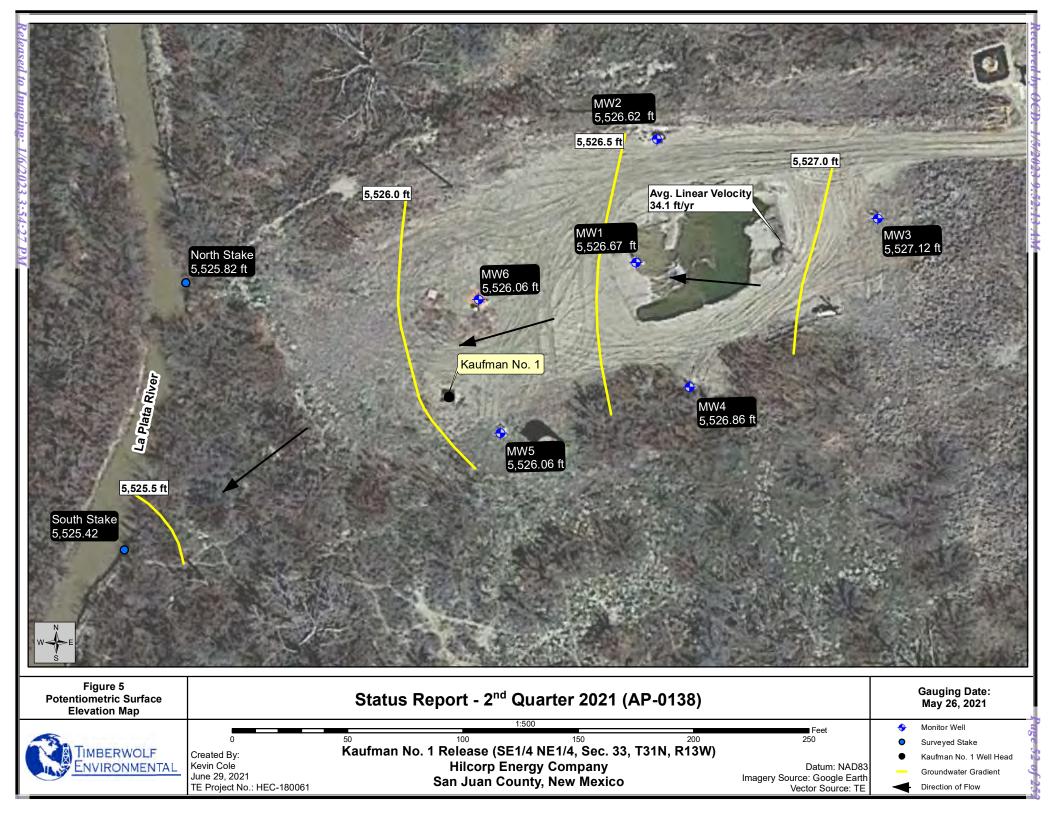


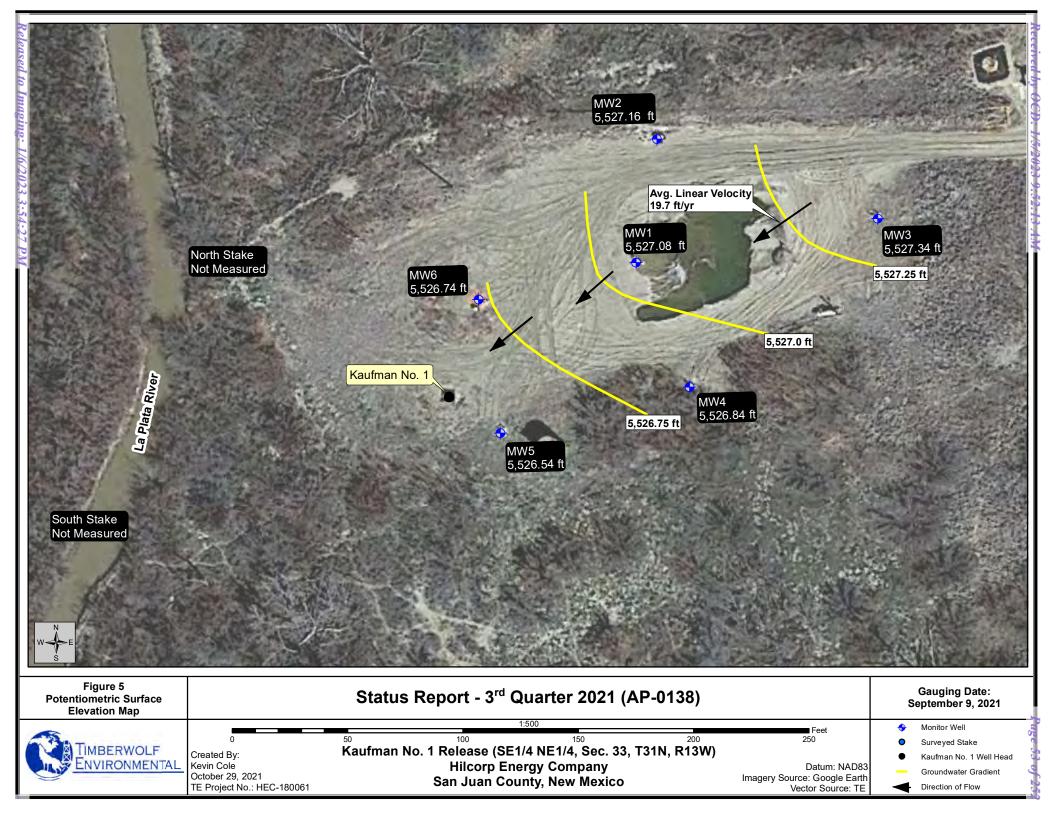


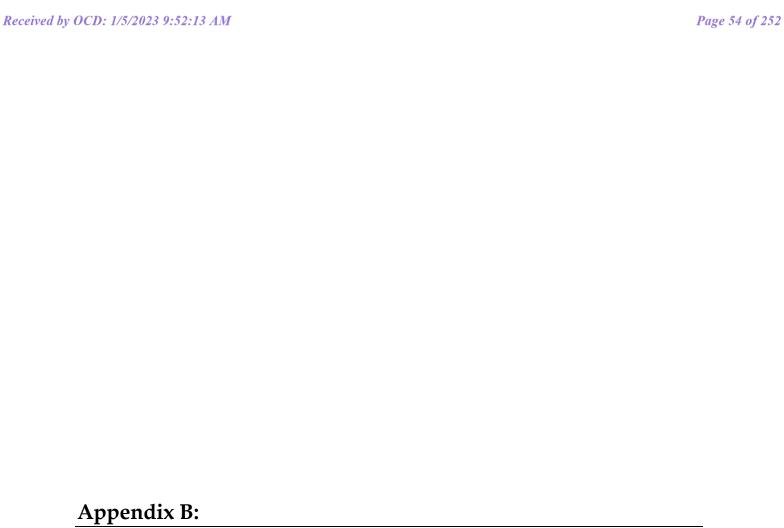












Laboratory Reports and Chain-of-Custody Documents



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

October 16, 2019

Jim Foster Timberwolf Environmental 1920 W Villa Maria Ste 205 Bryan, TX 77807

TEL: (979) 324-2139

FAX:

RE: Kaufman No 1 OrderNo.: 1910659

Dear Jim Foster:

Hall Environmental Analysis Laboratory received 8 sample(s) on 10/10/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report
Lab Order: 1910659

Date Reported: 10/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 1910659 **Project:** Kaufman No 1 Lab ID: 1910659-001 **Collection Date:** 10/9/2019 3:22:00 PM **Client Sample ID:** MW1 Matrix: AQUEOUS **Analyses** Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 10/14/2019 9:41:10 AM B63672 μg/L 1 Toluene ND 1.0 µg/L 10/14/2019 9:41:10 AM B63672 ND Ethylbenzene 1.0 μg/L 1 10/14/2019 9:41:10 AM B63672 Xylenes, Total ND 2.0 10/14/2019 9:41:10 AM B63672 μg/L Surr: 4-Bromofluorobenzene 95.4 80-120 %Rec 10/14/2019 9:41:10 AM B63672 Lab ID: 1910659-002 **Collection Date:** 10/9/2019 1:05:00 PM Client Sample ID: Matrix: AQUEOUS **Analyses** Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 μg/L 10/14/2019 10:28:38 AM B63672 1 Toluene ND 1.0 µg/L 10/14/2019 10:28:38 AM B63672 ND Ethylbenzene 1.0 10/14/2019 10:28:38 AM B63672 µg/L 1 Xylenes, Total ND 2.0 µg/L 1 10/14/2019 10:28:38 AM B63672 Surr: 4-Bromofluorobenzene 95.9 80-120 %Rec 10/14/2019 10:28:38 AM B63672 **Collection Date:** 10/9/2019 12:05:00 PM Lab ID: 1910659-003 Matrix: AQUEOUS Client Sample ID: RL Qual Units DF Date Analyzed **Analyses** Result **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1 0 μg/L 10/14/2019 10:52:22 AM B63672 1 Toluene ND 1.0 μg/L 10/14/2019 10:52:22 AM B63672 Ethylbenzene ND 1.0 10/14/2019 10:52:22 AM B63672 μg/L 1 Xylenes, Total ND 10/14/2019 10:52:22 AM B63672 2.0 μg/L

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

95.3

80-120

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

Surr: 4-Bromofluorobenzene

S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range

%Rec

- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 5

10/14/2019 10:52:22 AM B63672

Analytical Report

Lab Order: **1910659**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/16/2019

CLIENT:	Timberwolf Environmental	Lab Order:	1910659
---------	--------------------------	------------	---------

Project: Kaufman No 1

Lab ID: 1910659-004 **Collection Date:** 10/9/2019 2:50:00 PM

Client Sample ID: MW4 Matrix: AQUEOUS

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES					Ana	alyst: NSB
Benzene	ND	1.0	μg/L	1	10/14/2019 11:16:	12 AM B63672
Toluene	ND	1.0	μg/L	1	10/14/2019 11:16:	12 AM B63672
Ethylbenzene	ND	1.0	μg/L	1	10/14/2019 11:16:	12 AM B63672
Xylenes, Total	ND	2.0	μg/L	1	10/14/2019 11:16:	12 AM B63672
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	10/14/2019 11:16:	12 AM B63672

Lab ID: 1910659-005 **Collection Date:** 10/9/2019 2:05:00 PM

Client Sample ID: MW5 Matrix: AQUEOUS

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES					Ana	alyst: NSB
Benzene	4.1	1.0	μg/L	1	10/14/2019 11:39:4	15 AM B63672
Toluene	ND	1.0	μg/L	1	10/14/2019 11:39:4	15 AM B63672
Ethylbenzene	ND	1.0	μg/L	1	10/14/2019 11:39:4	15 AM B63672
Xylenes, Total	ND	2.0	μg/L	1	10/14/2019 11:39:4	15 AM B63672
Surr: 4-Bromofluorobenzene	107	80-120	%Rec	1	10/14/2019 11:39:4	15 AM B63672

Lab ID: 1910659-006 **Collection Date:** 10/9/2019 1:38:00 PM

Client Sample ID: MW6 Matrix: AQUEOUS

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES					Ana	alyst: NSB
Benzene	ND	1.0	μg/L	1	10/14/2019 12:03:	11 PM B63672
Toluene	ND	1.0	μg/L	1	10/14/2019 12:03:	11 PM B63672
Ethylbenzene	ND	1.0	μg/L	1	10/14/2019 12:03:	11 PM B63672
Xylenes, Total	ND	2.0	μg/L	1	10/14/2019 12:03:	11 PM B63672
Surr: 4-Bromofluorobenzene	106	80-120	%Rec	1	10/14/2019 12:03:	11 PM B63672

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 5

Analytical Report
Lab Order: 1910659

Date Reported: 10/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 1910659

Project: Kaufman No 1

Lab ID: 1910659-007 **Collection Date:** 10/9/2019 3:24:00 PM

Client Sample ID: Dup Matrix: AQUEOUS

RL Qual Units DF Date Analyzed **Analyses** Result **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 10/14/2019 3:13:09 PM B63672 μg/L 1 Toluene ND 1.0 µg/L 10/14/2019 3:13:09 PM B63672 ND Ethylbenzene 1.0 μg/L 1 10/14/2019 3:13:09 PM B63672 Xylenes, Total ND 2.0 μg/L 10/14/2019 3:13:09 PM B63672 1 Surr: 4-Bromofluorobenzene 92.7 80-120 %Rec 10/14/2019 3:13:09 PM B63672

Lab ID: 1910659-008 Collection Date:

Client Sample ID: Trip Blank Matrix: TRIP BLANK

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Methyl tert-butyl ether (MTBE) ND 2.5 μg/L 10/14/2019 3:36:36 PM B63672 1 Benzene ND 1.0 μg/L 10/14/2019 3:36:36 PM B63672 Toluene ND 1.0 10/14/2019 3:36:36 PM B63672 μg/L 1 ND Ethylbenzene 1.0 μg/L 1 10/14/2019 3:36:36 PM B63672 Xylenes, Total ND 2.0 μg/L 10/14/2019 3:36:36 PM B63672 1 1,2,4-Trimethylbenzene ND 1.0 μg/L 10/14/2019 3:36:36 PM B63672 1,3,5-Trimethylbenzene ND 10/14/2019 3:36:36 PM B63672 1.0 μg/L Surr: 4-Bromofluorobenzene 93.2 80-120 %Rec 10/14/2019 3:36:36 PM B63672

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 5

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1910659

16-Oct-19

Client: Timberwolf Environmental

Project: Kaufman No 1

Sample ID: RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBW Batch ID: **B63672** RunNo: 63672

Units: µg/L Prep Date: Analysis Date: 10/14/2019 SeqNo: 2175702

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

Methyl tert-butyl ether (MTBE) ND 2.5 Benzene ND 1.0 ND Toluene 1.0 Ethylbenzene ND 1.0 Xylenes, Total ND 2.0 1,2,4-Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0

Surr: 4-Bromofluorobenzene 19 20.00 95.4 മറ 120

Sample ID: 100NG BTEX LCS SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSW Batch ID: **B63672** RunNo: 63672

Pron Data: Analysis Date: 10/14/2010 Seallo: 2175702

Prep Date:	Analysis L	oate: 10)/14/2019	5	seqNo: 2	175703	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	20	2.5	20.00	0	98.1	80	119			
Benzene	20	1.0	20.00	0	99.0	80	120			
Toluene	20	1.0	20.00	0	98.6	80	120			
Ethylbenzene	20	1.0	20.00	0	99.2	80	120			
Xylenes, Total	60	2.0	60.00	0	100	80	119			
1,2,4-Trimethylbenzene	20	1.0	20.00	0	98.7	80	120			
1,3,5-Trimethylbenzene	20	1.0	20.00	0	97.8	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		98.4	80	120			

Sample ID: 1910659-001AMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	8021B: Volati	les		
Client ID: MW1	Batch	ID: B6	3672	F	RunNo: 6	3672				
Prep Date:	Analysis D	ate: 10	/14/2019	SeqNo: 2175705			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17	2.5	20.00	0	84.0	61.3	119			
Benzene	19	1.0	20.00	0.2640	95.5	80	120			
Toluene	19	1.0	20.00	0	95.4	75.5	120			
Ethylbenzene	19	1.0	20.00	0	96.2	80	120			
Xylenes, Total	58	2.0	60.00	0	97.3	77.3	119			
1,2,4-Trimethylbenzene	19	1.0	20.00	0	95.3	72.6	125			
1,3,5-Trimethylbenzene	19	1.0	20.00	0	93.7	68.3	127			

20.00

20

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Surr: 4-Bromofluorobenzene

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

98.0

80

120

Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Limit Page 4 of 5

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1910659**

16-Oct-19

Client: Timberwolf Environmental

Project: Kaufman No 1

Sample ID: 1910659-001AM	I SD SampT	уре: М	SD	TestCode: EPA Method 8021B: Volatiles							
Client ID: MW1	Batch	n ID: B6	3672	F	RunNo: 6	3672					
Prep Date:	Analysis D	Date: 10)/14/2019	5	SeqNo: 2	175706	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Methyl tert-butyl ether (MTBE)	18	2.5	20.00	0	87.6	61.3	119	4.21	20		
Benzene	20	1.0	20.00	0.2640	96.9	80	120	1.41	20		
Toluene	20	1.0	20.00	0	97.6	75.5	120	2.20	20		
Ethylbenzene	20	1.0	20.00	0	98.9	80	120	2.70	20		
Xylenes, Total	60	2.0	60.00	0	100	77.3	119	3.09	20		
1,2,4-Trimethylbenzene	20	1.0	20.00	0	99.9	72.6	125	4.77	20		
1,3,5-Trimethylbenzene	20	1.0	20.00	0	98.9	68.3	127	5.37	20		
Surr: 4-Bromofluorobenzene	21		20.00		105	80	120	0	0		

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 5



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **TIMBERWOLF ENVIRON** Work Order Number: 1910659 RcptNo: 1 Received By: Juan Roja 10/10/2019 7:55:00 AM Completed By: Leah Baca 10/11/2019 8:01:56 AM Las Baca Reviewed By: Chain of Custody 1. Is Chain of Custody complete? Yes 🗸 No 🗌 Not Present How was the sample delivered? Courier Log In Was an attempt made to cool the samples? Yes 🔽 No □ NA 🗌 No □ 4. Were all samples received at a temperature of >0° C to 6.0°C NA 🗌 Yes 🗹 No 🗆 Sample(s) in proper container(s)? Yes 🔽 No 🗌 Sufficient sample volume for indicated test(s)? Yes 🗸 7. Are samples (except VOA and ONG) properly preserved? Yes 🗹 No 🗌 No 🔽 8. Was preservative added to bottles? Yes 🗌 NA 📙 9. VOA vials have zero headspace? Yes 🔽 No 🗆 No VOA Vials Yes □ 10. Were any sample containers received broken? No 🗹 # of preserved bottles checked 11. Does paperwork match bottle labels? Yes 🗹 No 🗌 for pH: (Note discrepancies on chain of custody) (<2 or >12 unless noted) Adjusted? 12. Are matrices correctly identified on Chain of Custody? Yes 🗸 No 🗌 13. Is it clear what analyses were requested? Yes 🗹 No 🗌 14. Were all holding times able to be met? √Checked by: DAD 10/11/19 Yes 🗹 No 🗌 (If no, notify customer for authorization.) Special Handling (if applicable) 15. Was client notified of all discrepancies with this order? Yes 🗌 No 🗌 NA 🗹 Person Notified: Date By Whom: Via: 🔲 eMail 🔲 Phone 🦳 Fax 🦳 In Person Regarding: Client Instructions: 16. Additional remarks: 17. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No Seal Date 0.2 Good Not Present

Chain-of-Custody Record	Turn-Around Time:	Time:								Recei
Client: Timberwolf Environmental	Standard	d □ Rush			Ì	HALL ENVI	N I	/IR	ENVIRONMENT	AL
	Project Name:				•			ב ה	LABOKATOR	_
Mailing Address:		Kautma	No. 1	4901 1	www.n 4901 Hawkins NE	www.nailenvironmental.com	anviron Albugi	mental	.com	.D. 1
	Project #:]	T 10 T	505-345,3975	3975)))	FOR 3,	Abuquelque, ININ 67 109 Eav. 505 345 4107	1 31 2
Phone #:	8	12008				An	alvsis	Analysis Request	Request	023
email or Fax#: 1 in a team timberwolf.com Project Manage	Project Man	ager:	10 10 10 10				⊅ C	Ľ	(1)	<i>y</i> , <i>32</i>
QA/QC Package: /	- E	7	-	s (8021	SMIS		OS ԠOc		nəsdA\	2:13 AM
Accreditation: Az Compliance Dela Dela Dela Dela Dela Dela Dela Dela	Sampler: On Ice	J. 7.7.	MnA) N D B			L 'ZON			
□ EDD (Type)	#of Coalers:	PT 1P		GR		slei	, _E O	-		
	Cooler Temponduding CF):		0.1+0.1=0.2	1SD(əM 8				_
Date Time Matrix Sample Name	Container Type and #	Preservative Type	HEAL NO. 1910 659		EDB (N	RCRA	V) 09Z8	S) 0728		
T MW M 2251 brb-01	3 VOA	HCÍ	/00-					ļ		
10-9-17 1305 W MW 2	3 vo4	HU	700 -			<u> </u>				
6-9-19 1205 W MW 3	3 VOA	Hel	1 E00-					<u> </u>		
10-9-19 1450 W MW Y	3 VOA	Hil	A 400-							
10 9-19 1405 W AW 5	3 VO A	Hici	1 SOO-							<u> </u>
109-19 1338 W MW G	3 VOA	HCİ	1 900-					<u> </u>		
10-7-49 15-24 W DUP.	3 VOA	HCI	1 500-		<u></u>			-		
Top Blak			1 800 ·							
					-					
					_					
Time: -19 170 5	Received by:	Via:	Jofa/19 1705	Remarks:	<u> </u>		- -	-	- - -	
Date: Time: Relinquished by: Vight 175 Ohther Uhter Ohther Oht	Received by:	Via:	Date Time 10/10/10/19/3							age 62 o
ary, samples submitted to H	contracted to other ac	credited laboratories	This serves as n	ssibility. Any su	-contracte	d data will	be clearly	notated	n the analytical report	



ANALYTICAL REPORT

180061

November 27, 2019

Timberwolf Environmental, LLC

Sample Delivery Group: L1163631

Samples Received: 11/21/2019

HEC - 180061 Description:

Report To:

Project Number:

1920 W Villa Maria, Ste 205

Bryan, TX 77807















Entire Report Reviewed By:

Olivia Studebaker

Project Manager Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
MW1 L1163631-01	5
MW2 L1163631-02	6
MW3 L1163631-03	7
MW4 L1163631-04	8
MW5 L1163631-05	9
MW6 L1163631-06	10
Qc: Quality Control Summary	11
TPH by TCEQ Method 1005	11
GI: Glossary of Terms	12
Al: Accreditations & Locations	13
Sc: Sample Chain of Custody	14











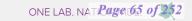








SAMPLE SUMMARY



			Collected by	Collected date/time	Received date	e/time
MW1 L1163631-01 GW			Michael Morse	11/19/19 11:35	11/21/19 08:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1386442	1	11/24/19 16:58	11/25/19 05:48	TH	Mt. Juliet, TN
			Collected by	Collected date/time	Received date	e/time
MW2 L1163631-02 GW			Michael Morse	11/19/19 11:20	11/21/19 08:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1386442	1	11/24/19 16:58	11/25/19 06:02	TH	Mt. Juliet, TN
			Collected by Michael Morse	Collected date/time	Received date	
MW3 L1163631-03 GW				11/19/19 10.40	11/21/19 00.30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1386442	1	11/24/19 16:58	11/25/19 06:16	TH	Mt. Juliet, TN
			Collected by	Collected date/time	Received date	e/time
MW4 L1163631-04 GW			Michael Morse	11/19/19 12:30	11/21/19 08:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1386442	1	11/24/19 16:58	11/25/19 06:29	TH	Mt. Juliet, TN
MW5 L1163631-05 GW			Collected by Michael Morse	Collected date/time 11/19/19 13:45	Received date 11/21/19 08:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1386442	1	11/24/19 16:58	11/25/19 06:43	TH	Mt. Juliet, TN
MW6 L1163631-06 GW			Collected by Michael Morse	Collected date/time 11/19/19 14:00	Received date 11/21/19 08:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location

WG1386442



















TPH by TCEQ Method 1005

11/24/19 16:58

11/25/19 06:57

TH

Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

¹Cp

















Olivia Studebaker Project Manager

ONE LAB. NATRAGE 67. of 252

Collected date/time: 11/19/19 11:35

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	11/25/2019 05:48	WG1386442
TPH C12 - C28	U		0.600	0.900	0.900	1	11/25/2019 05:48	WG1386442
TPH C28 - C35	U		0.600	0.900	0.900	1	11/25/2019 05:48	WG1386442
TPH C6 - C35	U		0.600	0.900	0.900	1	11/25/2019 05:48	WG1386442
(S) o-Terphenyl	93.0				70.0-130		11/25/2019 05:48	WG1386442



















ONE LAB. NAT Page 68 of 252

Collected date/time: 11/19/19 11:20

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	11/25/2019 06:02	WG1386442
TPH C12 - C28	U		0.600	0.900	0.900	1	11/25/2019 06:02	WG1386442
TPH C28 - C35	U		0.600	0.900	0.900	1	11/25/2019 06:02	WG1386442
TPH C6 - C35	U		0.600	0.900	0.900	1	11/25/2019 06:02	WG1386442
(S) o-Terphenyl	94.5				70.0-130		11/25/2019 06:02	WG1386442



















ONE LAB. NATRAGE 69 of 252

Collected date/time: 11/19/19 10:40

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	11/25/2019 06:16	WG1386442
TPH C12 - C28	U		0.600	0.900	0.900	1	11/25/2019 06:16	WG1386442
TPH C28 - C35	U		0.600	0.900	0.900	1	11/25/2019 06:16	WG1386442
TPH C6 - C35	U		0.600	0.900	0.900	1	11/25/2019 06:16	WG1386442
(S) o-Terphenyl	95.3				70.0-130		11/25/2019 06:16	WG1386442



















ONE LAB. NATRAGE OF 252

Collected date/time: 11/19/19 12:30

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	11/25/2019 06:29	WG1386442
TPH C12 - C28	U		0.600	0.900	0.900	1	11/25/2019 06:29	WG1386442
TPH C28 - C35	U		0.600	0.900	0.900	1	11/25/2019 06:29	WG1386442
TPH C6 - C35	U		0.600	0.900	0.900	1	11/25/2019 06:29	WG1386442
(S) o-Terphenyl	94.4				70.0-130		11/25/2019 06:29	WG1386442



















ONE LAB. NATRAGE 1 of 252

Collected date/time: 11/19/19 13:45

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	11/25/2019 06:43	WG1386442
TPH C12 - C28	U		0.600	0.900	0.900	1	11/25/2019 06:43	WG1386442
TPH C28 - C35	U		0.600	0.900	0.900	1	11/25/2019 06:43	WG1386442
TPH C6 - C35	U		0.600	0.900	0.900	1	11/25/2019 06:43	WG1386442
(S) o-Terphenyl	95.3				70.0-130		11/25/2019 06:43	WG1386442



















ONE LAB. NATRAGE 72 of 252

Collected date/time: 11/19/19 14:00

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	11/25/2019 06:57	WG1386442
TPH C12 - C28	U		0.600	0.900	0.900	1	11/25/2019 06:57	WG1386442
TPH C28 - C35	U		0.600	0.900	0.900	1	11/25/2019 06:57	WG1386442
TPH C6 - C35	U		0.600	0.900	0.900	1	11/25/2019 06:57	WG1386442
(S) o-Terphenyl	86.6				70.0-130		11/25/2019 06:57	WG1386442



















QUALITY CONTROL SUMMARY

ONE LAB. NAT Page 73 of 252

TPH by TCEQ Method 1005

L1163631-01,02,03,04,05,06

Method Blank (MB)

(MB) R3476219-1 11/2	4/19 22:01			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
TPH C6 - C12	U		0.600	0.900
TPH C12 - C28	U		0.600	0.900
TPH C28 - C35	U		0.600	0.900
TPH C6 - C35	U		0.600	0.900
(S) o-Ternhenyl	102			70 0-130







Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3476219-2 11/24	/19 22:15 • (LCSD) R3476219-3	11/24/19 22:29								
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%	
TPH C6 - C12	41.7	45.1	44.0	108	106	75.0-125			2.47	20	
TPH C12 - C28	41.7	44.5	41.7	107	100	75.0-125			6.50	20	
TPH C6 - C35	83.4	89.6	85.7	107	103	75.0-125			4.45	20	
(S) o-Terphenyl				97.7	90.2	70.0-130					









Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

Appreviations and	
MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.























Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660
Alaska	17-026
Arizona	AZ0612
Arkansas	88-0469
California	2932
Colorado	TN00003
Connecticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia ¹	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
lowa	364
Kansas	E-10277
Kentucky ^{1 6}	90010
Kentucky ²	16
Louisiana	Al30792
Louisiana 1	LA180010
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086

Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey-NELAP	TN002
New Mexico ¹	n/a
New York	11742
North Carolina	Env375
North Carolina ¹	DW21704
North Carolina ³	41
North Dakota	R-140
Ohio-VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	LAO00356
South Carolina	84004
South Dakota	n/a
Tennessee 1 4	2006
Texas	T104704245-18-15
Texas ⁵	LAB0152
Utah	TN00003
Vermont	VT2006
Virginia	460132
Washington	C847
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	
A2LA - ISO 17025 5	1461.02	
Canada	1461.01	
EPA-Crypto	TN00003	

AIHA-LAP,LLC EMLAP	100789
DOD	1461.01
USDA	P330-15-00234

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



















eived by OCD: 1/5/2023 9:5.	2:13 AM		Billing Info	rmation:				<i>p</i>	nalysis / Cor	tainer / Prese	rvative		Chain of Custod	Page 76 of	
Timberwolf Environm 1920 W Villa Maria, Ste 205 Bryan, TX 77807	ental, LL	С		s Payable Villa Maria, S X 77807	te 205	Pres Chk							Pace National	Analytical® Center for Testing & Innovation	
			Email To:			_	2						12065 Lebanon Ro		
Report to: Jim Foster Project			717236-11739-	@team +in	berwolf.	lom	00						Mount Juliet, TN 3 Phone: 615-758-5	7122 W. 858	
Project Description: HEC-1800	Col .			City/Ctata	NM		8					**	Phone: 800-767-5 Fax: 615-758-585	■5.A32	
Phone: 361-772-8706	Client Project		1	Lab Project #			Method						F1	F184	
Collected by (print): Wichael Morse	Site/Facility IC			P.O. #			8						Acctnum: Tif	MENVBTX	
Collected by (signature):	Rush? (L	ab MUST Be	Day	Quote #			TCE						Template:		
Immediately Packed on Ice N Y	Next Da		(Rad Only) ay (Rad Only)	Date Re	sults Needed	No. of	H						PB:	via Studebaker	
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	7						Shipped Via:	Sample # (lab only	
Mw1		GW		11-19-19	1135	14	1							-01	
MWZ		GW		11-19-19	1120	4	/							02	
Mw3		GW		11-19-19	1040	4	1							03	
MW4		GW		11-19-19	1230	4	1							04	
Mw5		GW		11-19-19	The second second second	4	/	-dr -d						05	
MW 6		GW		11-19-19	1400	Ÿ	/							06	
		/	100			1									
Fig. 1		441		and the same	- M26				Variety I						
Matrix:	Remarks:				2	1							Sample Receipt	Checklist	
S - Soil AIR - Air F - Filter W - Groundwater B - Bioassay	Remarks.								pH	Temp		COC Sea COC Sig Bottles	al Present/Intac gned/Accurate: s arrive intact:	T: NP Y	
ow - wastewater OW - Drinking Water OT - Other	Samples retur	rned via:	ırier		Tracking # 7	78	17	1830) 2	980		Suffici	bottles used: ient volume sent If Applica To Headspace:	. Si -	
Relinquished by : (Signature)		Date:		Time:	Received by: (Signa	ture)			Trip Blank R	7 4	MeoH	Preserv	D SCREEN: <	The second secon	
Relinquished by : (Signature)		Date:			Received by: (Signa	ture)			Temp:	°C Bottle	Received:	If preser	vation required by L	ogin: Date/Time	
Relinquished by : (Signature)		Date:	1822 T	Time:	Received for lab by	: (Signa	tyre)		Date:	/19 F	30	Hold:		Condition: NCF / OK	



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

January 24, 2020

Jim Foster Timberwolf Environmental 1920 W Villa Maria Ste 205 Bryan, TX 77807

TEL: (979) 324-2139

FAX

RE: Kaufman NO 1 OrderNo.: 2001688

Dear Jim Foster:

Hall Environmental Analysis Laboratory received 8 sample(s) on 1/17/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order: **2001688**Date Reported: **1/24/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 2001688 **Project:** Kaufman NO 1 Lab ID: 2001688-001 Collection Date: 1/16/2020 12:15:00 PM **Client Sample ID:** MW1 Matrix: GROUNDWATER **Analyses** Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB 1/23/2020 2:18:32 PM Benzene ND 1.0 B66017 μg/L 1 Toluene ND 1.0 μg/L 1 1/23/2020 2:18:32 PM B66017 ND Ethylbenzene 1.0 μg/L 1 1/23/2020 2:18:32 PM B66017 Xylenes, Total ND 2.0 μg/L 1/23/2020 2:18:32 PM B66017 Surr: 4-Bromofluorobenzene 99.4 80-120 %Rec 1/23/2020 2:18:32 PM B66017 Lab ID: 2001688-002 **Collection Date:** 1/16/2020 9:19:00 AM **Client Sample ID: Matrix:** GROUNDWATER Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 μg/L 1/23/2020 3:05:19 PM B66017 1 Toluene ND 1.0 μg/L 1 1/23/2020 3:05:19 PM B66017 ND Ethylbenzene 1.0 B66017 μg/L 1 1/23/2020 3:05:19 PM Xylenes, Total ND 2.0 μg/L 1 1/23/2020 3:05:19 PM B66017 Surr: 4-Bromofluorobenzene 99.8 80-120 %Rec 1/23/2020 3:05:19 PM B66017 Lab ID: 2001688-003 **Collection Date:** 1/16/2020 9:52:00 AM **Matrix:** GROUNDWATER Client Sample ID: RL Qual Units DF Date Analyzed Analyses Result **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1 0 μg/L 1/23/2020 3:28:36 PM B66017 1 Toluene ND 1.0 μg/L 1/23/2020 3:28:36 PM B66017 Ethylbenzene ND 1.0 B66017 μg/L 1 1/23/2020 3:28:36 PM Xylenes, Total ND 1/23/2020 3:28:36 PM B66017 2.0 µg/L 1 Surr: 4-Bromofluorobenzene 105 80-120 %Rec 1/23/2020 3:28:36 PM B66017

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 4

Analytical Report
Lab Order: 2001688

Date Reported: 1/24/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 2001688 **Project:** Kaufman NO 1 Lab ID: 2001688-004 Collection Date: 1/16/2020 10:21:00 AM **Client Sample ID:** MW4 Matrix: GROUNDWATER **Analyses** Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB 1/23/2020 3:52:02 PM Benzene ND 1.0 B66017 μg/L 1 Toluene ND 1.0 μg/L 1 1/23/2020 3:52:02 PM B66017 ND Ethylbenzene 1.0 μg/L 1 1/23/2020 3:52:02 PM B66017 Xylenes, Total ND 2.0 μg/L 1/23/2020 3:52:02 PM B66017 Surr: 4-Bromofluorobenzene 99.8 80-120 %Rec 1/23/2020 3:52:02 PM B66017 Lab ID: 2001688-005 **Collection Date:** 1/16/2020 11:37:00 AM **Client Sample ID: Matrix:** GROUNDWATER Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene 1.2 1.0 μg/L 1/23/2020 4:15:32 PM B66017 1 Toluene ND 1.0 μg/L 1 1/23/2020 4:15:32 PM B66017 ND Ethylbenzene 1.0 1/23/2020 4:15:32 PM B66017 μg/L 1 Xylenes, Total ND 2.0 μg/L 1 1/23/2020 4:15:32 PM B66017 Surr: 4-Bromofluorobenzene 101 80-120 %Rec 1/23/2020 4:15:32 PM B66017 Lab ID: 2001688-006 **Collection Date:** 1/16/2020 10:58:00 AM **Matrix:** GROUNDWATER Client Sample ID: RL Qual Units DF Date Analyzed Analyses Result **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1 0 μg/L 1/23/2020 4:39:01 PM B66017 1 Toluene ND 1.0 μg/L 1/23/2020 4:39:01 PM B66017 Ethylbenzene ND 1.0 B66017 μg/L 1 1/23/2020 4:39:01 PM Xylenes, Total ND 1/23/2020 4:39:01 PM B66017 2.0 µg/L Surr: 4-Bromofluorobenzene 99.6 80-120 %Rec 1/23/2020 4:39:01 PM B66017

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 4

Analytical Report

Lab Order: **2001688**Date Reported: **1/24/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 2001688

Project: Kaufman NO 1

Lab ID: 2001688-007 **Collection Date:** 1/16/2020 11:39:00 AM

Client Sample ID: DUP Matrix: GROUNDWATER

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene 1.0 1/23/2020 5:02:32 PM B66017 1.6 μg/L 1 Toluene ND 1.0 μg/L 1 1/23/2020 5:02:32 PM B66017 ND Ethylbenzene 1.0 μg/L 1 1/23/2020 5:02:32 PM B66017 Xylenes, Total ND 2.0 μg/L 1/23/2020 5:02:32 PM B66017 1 Surr: 4-Bromofluorobenzene 99.6 80-120 %Rec 1/23/2020 5:02:32 PM B66017

Lab ID: 2001688-008 Collection Date:

Client Sample ID: Trip Blank Matrix: TRIP BLANK

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Methyl tert-butyl ether (MTBE) ND 2.5 μg/L 1/23/2020 5:25:56 PM B66017 1 Benzene ND 1.0 μg/L 1 1/23/2020 5:25:56 PM B66017 Toluene ND 1.0 1/23/2020 5:25:56 PM B66017 μg/L 1 ND Ethylbenzene 1.0 μg/L 1 1/23/2020 5:25:56 PM B66017 Xylenes, Total ND 2.0 μg/L 1 1/23/2020 5:25:56 PM B66017 1,2,4-Trimethylbenzene ND 1.0 μg/L 1 1/23/2020 5:25:56 PM B66017 1,3,5-Trimethylbenzene ND 1.0 μg/L 1 1/23/2020 5:25:56 PM B66017 Surr: 4-Bromofluorobenzene 96.5 80-120 %Rec 1/23/2020 5:25:56 PM B66017

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 4

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2001688**

24-Jan-20

Client: Timberwolf Environmental

Project: Kaufman NO 1

Sample ID: mb-1 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBW Batch ID: B66017 RunNo: 66017

Prep Date: Analysis Date: 1/23/2020 SeqNo: 2267714 Units: µg/L Analyte PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Result Methyl tert-butyl ether (MTBE) ND 2.5 Benzene ND 1.0 ND Toluene 1.0 Ethylbenzene ND 1.0 Xylenes, Total ND 2.0 1,2,4-Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0 Surr: 4-Bromofluorobenzene 23 20.00 116 80 120

Sample ID: 100ng btex Ics SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSW Batch ID: **B66017** RunNo: 66017 Prep Date: Analysis Date: 1/23/2020 SeqNo: 2267715 Units: µg/L PQL SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result LowLimit HighLimit Qual Methyl tert-butyl ether (MTBE) 19 2.5 20.00 0 95.6 80 119 Benzene 20 1.0 20.00 0 101 80 120 Toluene 20 20.00 0 100 80 120 1.0 Ethylbenzene 20 1.0 20.00 0 99.7 80 120 60 2.0 60.00 0 101 Xylenes, Total 80 119 1,2,4-Trimethylbenzene 20 1.0 20.00 0 99.1 80 120 1,3,5-Trimethylbenzene 20 0 98.0 120 1.0 20.00 80 Surr: 4-Bromofluorobenzene 21 20.00 104 80 120

Sample ID: 100ng btex lcsd	Samp1	ype: LC	SD	TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS02	Batcl	h ID: B6	6017	F	RunNo: 6	6017				
Prep Date:	Analysis D	Date: 1/	23/2020	5	SeqNo: 2	267716	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	18	2.5	20.00	0	89.0	80	119	7.11	20	
Benzene	20	1.0	20.00	0	100	80	120	0.608	20	
Toluene	20	1.0	20.00	0	98.9	80	120	1.08	20	
Ethylbenzene	20	1.0	20.00	0	98.4	80	120	1.25	20	
Xylenes, Total	60	2.0	60.00	0	99.2	80	119	1.59	20	
1,2,4-Trimethylbenzene	19	1.0	20.00	0	95.7	80	120	3.51	20	
1,3,5-Trimethylbenzene	19	1.0	20.00	0	94.7	80	120	3.38	20	
Surr: 4-Bromofluorobenzene	19		20.00		94.3	80	120	0		

Qualifiers:

* Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

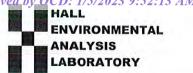
E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 4 of 4



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TIMBERWOLF ENVIRON	Work Order Numbe	r: 200	1688		RcptNo	o: 1
Received By: Desiree Dominguez	1/17/2020 9:30:00 AM	И		Da		
Completed By: Isaiah Ortiz	1/17/2020 11:05:05 A	М		ILC	24	
Reviewed By: ENH	1/17/20				,	
Chain of Custody						
1. Is Chain of Custody sufficiently complete?		Yes	/	No 🗌	Not Present	
2. How was the sample delivered?		Cou	rier			
Louis						
Log In 3. Was an attempt made to cool the samples?		Von	V	No 🗌	NA 🗆	
o. Was an attempt made to coor the samples:		165		140	INA L	
4. Were all samples received at a temperature	of >0° C to 6.0°C	Yes	V	No 🗌	NA 🗆	
5. Sample(s) in proper container(s)?		Yes	V	No 🗆		
6. Sufficient sample volume for indicated test(s)	?	Yes	~	No 🗆		
7. Are samples (except VOA and ONG) properly		Yes	V	No 🗌		
8. Was preservative added to bottles?		Yes		No 🔽	NA 🗆	
9. Received at least 1 vial with headspace <1/4	for AQ VOA?	Yes	V	No 🗌	NA 🗆	
10. Were any sample containers received broke	n?	Yes		No 🗹	# of preserved	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes	V	No 🗌	bottles checked for pH: (<2 g	y>12 unless noted)
12. Are matrices correctly identified on Chain of	Custody?	Yes	V	No 🗌	Adjusted?	
13. Is it clear what analyses were requested?		Yes	V	No 🗌		1-11
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes	V	No 🗆	Checked by:	JR 1/17/20
Special Handling (if applicable)				/		
15. Was client notified of all discrepancies with t	his order?	Yes		No 🗌	NA 🗹	
Person Notified:	Date:					
By Whom:	Via:	eM	ail 🔲 F	Phone Fax	☐ In Person	
Regarding:		***********	-		PANAMATA AND AND AND AND AND AND AND AND AND AN	
Client Instructions:		es-deti				
16. Additional remarks: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	samples	00	JUA	Rinak	010 70	11-60
17. Cooler Information	Joe Pies			131011	01/2	117120
Every March Physics with a second of the	eal Intact Seal No	Seal D	ate	Signed By		
1 3.0 Good Not	Present			200		

Received by OCD: 1/5/202 52:13 AM Page 83 of 252 **ANALYSIS LABORATORY** HALL ENVIRONMENTAL If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report. 4901 Hawkins NE - Albuquerque, NM 87109 Fax 505-345-4107 www.hallenvironmental.com **Analysis Request** Total Coliform (Present/Absent) (AOV-ima2) 07S8 (AOV) 09S8 Bt' NO3' 105, PO4, 504 CI' E' Tel. 505-345-3975 RCRA 8 Metals PAHs by 8310 or 8270SIMS EDB (Method 504.1) Pesticides/8082 PCB's Remarks: (ORM \ ORO \ DRO \ MRO) (X3TB WIBE 1 TMB (8051) > 1/14/20 9:30 -003 Cooler Temp(including cF): 3,1-0,1=3,0 (°C) 400-70 1330 8 HEAL NO. Time Jim @ team timberwolf. Can 16. Jin Date ON [Project Name: Kaufmon Courier □ Rush Preservative Sampler: Michael Morse Project Manager: HEC- 1800 61 ユンエ HCL M Yes ガン オクエ だし HC HCI 力に Type Turn-Around Time: Standard
 Standard # of Coolers: Type and # 1 VO4 2 N 2 Received by: Container Project #: On Ice: eceived by NOA V@4 YOY VOA VOA 104 18 ☐ Level 4 (Full Validation) email or Fax#: Fix @ for + thousalt. Con Chain-of-Custody Record CR233, Suite Environmenta Blank Time Matrix Sample Name えどろ Mw 3 MWG ME 4 NWS 32 Phone #: 979- 324- 2139 Dup. Trip □ Az Compliance 8130 Relinquished by: Relinquished by Client: Timberwolf □ Other Mailing Address: (09) 3 Duanso, Co 1-16-20 13:30 5121 02-91-1 QA/QC Package: 1-16-20 10 58 256 02-21-1 1821 120 16-201129 16-60 1137 □ EDD (Type) Accreditation: 616 02-91-1 Time: Time: Standard
 Standard □ NELAC 02-97--10-20 Date Date: Date:



ANALYTICAL REPORT

January 24, 2020

Timberwolf Environmental, LLC

Sample Delivery Group: L1180702
Samples Received: 01/17/2020
Project Number: HEC-180061
Description: Kaufman No. 1

Report To: Jim Foster

1920 W Villa Maria, Ste 205

Bryan, TX 77807

¹Cp

²Tc















Entire Report Reviewed By:

Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicating procedured by Proce Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MT-UL-0068 Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Sc: Sample Chain of Custody

15

Cp: Cover Page	•
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
MW 1 L1180702-01	5
MW 2 L1180702-02	6
MW 3 L1180702-03	7
MW 4 L1180702-04	8
MW 5 L1180702-05	9
MW 6 L1180702-06	10
TRIP BLANK L1180702-07	1
Qc: Quality Control Summary	12
TPH by TCEQ Method 1005	12
GI: Glossary of Terms	13
Al: Accreditations & Locations	14



















Method	MW 1 L1180702-01 GW			Collected by MM/JF	Collected date/time 01/16/20 12:15	Received da 01/17/20 08:4	
My 1180702-02 GW		Ratch	Dilution				
MW 2 L1180702-02 GW	mediod	Batch	Dilation	•	*	Analyst	Location
Method	TPH by TCEQ Method 1005	WG1415146	1	01/22/20 12:20	01/22/20 19:02	FM	Mt. Juliet, TN
Mode	MW 2 L1180702-02 GW			,			
MW 3 L1180702-03 GW MM/JF Collected date/time MM/JF MM/JF O116/20 09.52 O117/20 08.45 Method	Method	Batch	Dilution	•	•	Analyst	Location
MMUS 1 L1180702-03 GW Method Batch Batch Dilution Preparation date/time	TPH by TCEQ Method 1005	WG1415146	1	01/22/20 12:20	01/22/20 19:16	FM	Mt. Juliet, TN
MW 4 L1180702-04 GW W61415146 1 01/22/20 12:20 01/22/20 19:30 FM Mt. Juliet. TI MW 4 L1180702-04 GW MMJF	MW 3 L1180702-03 GW			•			
Collected by MMJF Collected date/time Received date/time MMJF O1/16/20 10:21 O1/17/20 08:45	Method	Batch	Dilution	•	*	Analyst	Location
MW 4 L1180702-04 GW MM/JF 01/16/20 10:21 O1/17/20 08:45 Method Batch Dilution date/time Preparation date/time date/time Analysis date/time Analysis date/time TPH by TCEQ Method 1005 WG1415146 1 01/22/20 12:20 01/22/20 19:43 FM Mt. Juliet, TI MW 5 L1180702-05 GW Collected by MM/JF Collected date/time Received date/time Method Batch Dilution Preparation date/time Analysis Analyst Location date/time TPH by TCEQ Method 1005 WG1415146 1 01/22/20 12:20 01/22/20 19:57 FM Mt. Juliet, TI MW 6 L1180702-06 GW Collected by MM/JF Collected date/time date/time Received date/time Method Batch Dilution Preparation date/time date/time date/time Analysis Analyst Location date/time TPH by TCEQ Method 1005 WG1415146 1 01/22/20 12:20 01/22/20 12:20 01/22/20 20:11 FM Mt. Juliet, TI Mt. Juliet, TI TRIP BLANK L1180702-07 GW Collected by MM/JF Collected date/time date/time date/time Received date/time TRIP BLANK L1180702-07 GW Batch Dilution Preparation Analysis Analyst Location	TPH by TCEQ Method 1005	WG1415146	1	01/22/20 12:20	01/22/20 19:30	FM	Mt. Juliet, TN
MW 5 L1180702-05 GW MG1415146 1 01/22/20 12:20 01/22/20 19:43 FM Mt. Juliet, TI	MW 4 L1180702-04 GW			•			
Collected by Collected date/time Received date/time MM/JF 01/16/20 11:37 01/17/20 08:45	Method	Batch	Dilution	· ·	•	Analyst	Location
MW 5 L1180702-05 GW Batch Dilution Preparation Analysis Analysis Location	TPH by TCEQ Method 1005	WG1415146	1	01/22/20 12:20	01/22/20 19:43	FM	Mt. Juliet, TN
Method M	MW 5 L1180702-05 GW			•			
Collected by Collected date/time Received date/time O1/16/20 10:58 O1/17/20 08:45	Method	Batch	Dilution	•	•	Analyst	Location
MW 6 L1180702-06 GW MM/JF 01/16/20 10:58 01/17/20 08:45 Method Batch Dilution date/time Analysis date/time Analyst Location date/time TPH by TCE0 Method 1005 WG1415146 1 01/22/20 12:20 01/22/20 20:11 FM Mt. Juliet, The date/time of time of time of time of the properties of time of	TPH by TCEQ Method 1005	WG1415146	1	01/22/20 12:20	01/22/20 19:57	FM	Mt. Juliet, TN
Method M	MW 6 L1180702-06 GW			•			
TRIP BLANK L1180702-07 GW WG1415146 1 01/22/20 12:20 01/22/20 20:11 FM Mt. Juliet, TM Collected by Collected date/time Received date/time MM/JF 01/16/20 11:39 01/17/20 08:45 Method Batch Dilution Preparation Analysis Analyst Location	Method	Batch	Dilution	•	•	Analyst	Location
TRIP BLANK L1180702-07 GW MM/JF 01/16/20 11:39 01/17/20 08:45 Method Batch Dilution Preparation Analysis Analyst Location	TPH by TCEQ Method 1005	WG1415146	1			FM	Mt. Juliet, TN
	TRIP BLANK L1180702-07 GW						
	Method	Batch	Dilution		•	Analyst	Location



















TPH by TCEQ Method 1005

WG1415146

01/22/20 12:20

01/22/20 20:25

FM

Mt. Juliet, TN

Olivia Studebaker Project Manager

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



















Timberwolf Environmental, LLC

ONE LAB. NATRAGE 88 of 252

Collected date/time: 01/16/20 12:15

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	01/22/2020 19:02	WG1415146
TPH C12 - C28	U		0.600	0.900	0.900	1	01/22/2020 19:02	WG1415146
TPH C28 - C35	U		0.600	0.900	0.900	1	01/22/2020 19:02	WG1415146
TPH C6 - C35	U		0.600	0.900	0.900	1	01/22/2020 19:02	WG1415146
(S) o-Terphenyl	101				70.0-130		01/22/2020 19:02	WG1415146



















ONE LAB. NAT Bage 89 of 252

Collected date/time: 01/16/20 09:19

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	01/22/2020 19:16	WG1415146
TPH C12 - C28	U		0.600	0.900	0.900	1	01/22/2020 19:16	WG1415146
TPH C28 - C35	U		0.600	0.900	0.900	1	01/22/2020 19:16	WG1415146
TPH C6 - C35	U		0.600	0.900	0.900	1	01/22/2020 19:16	WG1415146
(S) o-Terphenyl	105				70.0-130		01/22/2020 19:16	WG1415146



















ONE LAB. NAT Page 90 of 252

Collected date/time: 01/16/20 09:52

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	01/22/2020 19:30	WG1415146
TPH C12 - C28	U		0.600	0.900	0.900	1	01/22/2020 19:30	WG1415146
TPH C28 - C35	U		0.600	0.900	0.900	1	01/22/2020 19:30	WG1415146
TPH C6 - C35	U		0.600	0.900	0.900	1	01/22/2020 19:30	WG1415146
(S) o-Terphenyl	101				70.0-130		01/22/2020 19:30	WG1415146



















ONE LAB. NAT Page 91 of 252

Collected date/time: 01/16/20 10:21

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	01/22/2020 19:43	WG1415146
TPH C12 - C28	U		0.600	0.900	0.900	1	01/22/2020 19:43	WG1415146
TPH C28 - C35	U		0.600	0.900	0.900	1	01/22/2020 19:43	WG1415146
TPH C6 - C35	U		0.600	0.900	0.900	1	01/22/2020 19:43	WG1415146
(S) o-Terphenyl	92.6				70.0-130		01/22/2020 19:43	WG1415146



















ONE LAB. NATRAGE 92 of 252

Collected date/time: 01/16/20 11:37

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	01/22/2020 19:57	WG1415146
TPH C12 - C28	U		0.600	0.900	0.900	1	01/22/2020 19:57	WG1415146
TPH C28 - C35	U		0.600	0.900	0.900	1	01/22/2020 19:57	WG1415146
TPH C6 - C35	U		0.600	0.900	0.900	1	01/22/2020 19:57	WG1415146
(S) o-Terphenyl	92.1				70.0-130		01/22/2020 19:57	WG1415146



















ONE LAB. NATRAGE 93 of 252

Collected date/time: 01/16/20 10:58

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	01/22/2020 20:11	WG1415146
TPH C12 - C28	U		0.600	0.900	0.900	1	01/22/2020 20:11	WG1415146
TPH C28 - C35	U		0.600	0.900	0.900	1	01/22/2020 20:11	WG1415146
TPH C6 - C35	U		0.600	0.900	0.900	1	01/22/2020 20:11	WG1415146
(S) o-Terphenyl	93.6				70.0-130		01/22/2020 20:11	WG1415146



















ONE LAB. NAT Page 94 of 252

Collected date/time: 01/16/20 11:39

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	01/22/2020 20:25	WG1415146
TPH C12 - C28	U		0.600	0.900	0.900	1	01/22/2020 20:25	WG1415146
TPH C28 - C35	U		0.600	0.900	0.900	1	01/22/2020 20:25	WG1415146
TPH C6 - C35	U		0.600	0.900	0.900	1	01/22/2020 20:25	WG1415146
(S) o-Terphenyl	90.9				70.0-130		01/22/2020 20:25	WG1415146



















QUALITY CONTROL SUMMARY

ONE LAB. NAT Page 95 of 252

TPH by TCEQ Method 1005

L1180702-01,02,03,04,05,06,07

Method Blank (MB)

(MB) R3493111-1 01/2	2/20 14:49			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
TPH C6 - C12	U		0.600	0.900
TPH C12 - C28	U		0.600	0.900
TPH C28 - C35	U		0.600	0.900
TPH C6 - C35	U		0.600	0.900
(S) o-Terphenyl	86.5			70.0-130











// CC/ D2/(D2/11/12 D1//	22/20 1E:02 /LCCD	\ D2402111 2	01/22/20 1E:16						J. CC. P.34034M. 3. 04/23/20 4F-03. J. CCP). P.34034M. 3. 04/23/20 4F-40								
(LCS) R3493111-2 01/22/20 15:02 • (LCSD) R3493111-3 01/22/20 15:16																	
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits							
Analyte	mg/I	mg/l	mg/l	%	%	%			%	%							
TPH C6 - C12	41.7	36.5	36.5	87.5	87.5	75.0-125			0.000	20							
TPH C12 - C28	41.7	42.4	42.2	102	101	75.0-125			0.473	20							
TPH C6 - C35	83.4	78.9	78.7	94.6	94.4	75.0-125			0.254	20							
(S) o-Terphenyl				89.9	93.1	70.0-130											







Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

Appreviations and	
MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.





















Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660
Alaska	17-026
Arizona	AZ0612
Arkansas	88-0469
California	2932
Colorado	TN00003
Connecticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia ¹	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky 16	90010
Kentucky ²	16
Louisiana	Al30792
Louisiana ¹	LA180010
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086

Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey-NELAP	TN002
New Mexico ¹	n/a
New York	11742
North Carolina	Env375
North Carolina 1	DW21704
North Carolina ³	41
North Dakota	R-140
Ohio-VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	LAO00356
South Carolina	84004
South Dakota	n/a
Tennessee 1 4	2006
Texas	T104704245-18-15
Texas ⁵	LAB0152
Utah	TN00003
Vermont	VT2006
Virginia	460132
Washington	C847
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 ⁵	1461.02
Canada	1461.01
EPA-Crypto	TN00003

AIHA-LAP,LLC EMLAP	100789
DOD	1461.01
USDA	P330-15-00234

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



















			Billing Info						Analysis / Cor	ntainer / Preserva	tive		Chain of Custody	Page of _
			Timber 1920	Foster Welf Env W. Villa	Maria #	205	V						Pace A National Ces	Analytical* New Yorking & Innovation
Percenta:			Brya	n,Tx.	77807			1						
Report to: Jim Foster			Email 10:	Jime te	an timber	solf.lo	4		畫 優				12065 Lebanon Rd Mount Juliet, TN 371 Phone: 615-758-585	
Project Description: Kaufman	No. 1		Zin ,216*	City/State Collected:	UM								Phone: 800-767-585 Fax: 615-758-5859	
Phone:	Client Project			Lab Project #	ASTERNAL PROPERTY.		2						A12	-1180705 B
Collected by (print): Michael Morse/Jim Fos	Site/Facility II			P.O. #			00						Acctnum: 7/	MENBTX
Collected by (signature): Immediately Packed on Ice N Y	Rush? (I		Day	Quote #	sults Needed	No.	ER						Template:	olivia Studebala
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	T			1	3		Shipped Via:	Sample # (lab only)
MWI		GW	NA	1-16-20	1215	2	V						Remarks	~ 01
MWZ		GW	1	1-16-20	7	Z	-		P.A.					- 02
MW3		GW		1-16-20		_	-							-63
MW4		GW		1-16-20		2	V,							- 04
MW5		GW		1-16-20		2	1							(0
MW6		GW		The second secon	1058	2	V,	100						-de
TRIP BLANK		100		H6-20		7	1		走!					-0
	1/20	2 -	-			774	San S		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
2 / 2		-00-						10.1						
		100					376				14			
Matrix: 5 - Soil AIR - Air F - Filter W - Groundwater B - Bioassay	Remarks:	1 Vin							pH	Temp		COC Sea	Sample Receipt Ch l Present/Intact med/Accurate: arrive intact:	NP Y N
W - Drinking Water T - Other	Samples retur	rned via:	ırier	T	racking #	177	- 9	107		- OKING!		Suffici	bottles used: ent volume sent: If Applicab	ZY N
elinquished by: (Signature)	4	Date: 1-16			Received by: (Sign		5 0	000	7397 Trip Blank R		lo / MeoH	Preserv PA	o Headspace: ration Correct/Ch D SCREEN. <0.	eckeda Y N
telinquished by : (Signature)	114	Date:		11,000	teceived by: (Sign	nature)		0	Temp:	°C Bottles Re	ceived:	If preserv	vation required by Log	in: Date/Time
Relinquished by : (Signature)		Date:		Time: R	leceived for lab b	y: (Signa	ture)	5	Date:	Time:		Hold:		Condition:
eleased to Imaging: 1/6/20	23 3:54:27 F	PM						~	1-17-	20 08	45			100



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

April 20, 2020

Jim Foster Timberwolf Environmental 1920 W Villa Maria Ste 205 Bryan, TX 77807

TEL: (979) 324-2139

FAX:

RE: Kaufman No 1 OrderNo.: 2004514

Dear Jim Foster:

Hall Environmental Analysis Laboratory received 7 sample(s) on 4/10/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order: **2004514**Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 2004514

Project: Kaufman No 1

Lab ID: 2004514-001 **Collection Date:** 4/9/2020 2:19:00 PM

Client Sample ID: MW1 Matrix: AQUEOUS

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: CCM ND 1.0 4/18/2020 12:48:00 AM B68201 Benzene μg/L 1 Toluene ND 1.0 µg/L 4/18/2020 12:48:00 AM B68201 ND Ethylbenzene 1.0 μg/L 1 4/18/2020 12:48:00 AM B68201 Xylenes, Total ND 4/18/2020 12:48:00 AM 1.5 μg/L 1 96.9 70-130 Surr: 1,2-Dichloroethane-d4 %Rec 1 4/18/2020 12:48:00 AM B68201 Surr: Dibromofluoromethane 96.8 70-130 %Rec 4/18/2020 12:48:00 AM B68201 Surr: Toluene-d8 105 70-130 %Rec 4/18/2020 12:48:00 AM B68201

Lab ID: 2004514-002 **Collection Date:** 4/9/2020 10:53:00 AM

Client Sample ID: MW2 Matrix: AQUEOUS

Analyses Result **RL Oual Units DF** Date Analyzed **Batch ID EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: CCM Benzene ND 1.0 4/18/2020 1:13:00 AM B68201 µg/L Toluene ND 1.0 µg/L 1 4/18/2020 1:13:00 AM B68201 Ethylbenzene ND 4/18/2020 1:13:00 AM B68201 1.0 μg/L 1 Xylenes, Total ND 1.5 μg/L 1 4/18/2020 1:13:00 AM B68201 Surr: 1,2-Dichloroethane-d4 %Rec 99.4 70-130 1 4/18/2020 1:13:00 AM B68201 Surr: Dibromofluoromethane 98.9 70-130 %Rec 4/18/2020 1:13:00 AM B68201 Surr: Toluene-d8 105 70-130 %Rec 4/18/2020 1:13:00 AM B68201

Lab ID: 2004514-003 **Collection Date:** 4/9/2020 11:32:00 AM

Client Sample ID: MW3 Matrix: AQUEOUS

Result **RL Qual Units DF** Date Analyzed **Batch ID Analyses EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: CCM Benzene ND 1.0 4/18/2020 1:36:00 AM B68201 µg/L 1 Toluene ND 1.0 μg/L 1 4/18/2020 1:36:00 AM B68201 Ethylbenzene ND 1.0 μg/L 1 4/18/2020 1:36:00 AM B68201 Xylenes, Total ND 1.5 μg/L 1 4/18/2020 1:36:00 AM B68201 Surr: 1,2-Dichloroethane-d4 99.9 70-130 %Rec 1 4/18/2020 1:36:00 AM B68201 Surr: Dibromofluoromethane 98.3 70-130 %Rec 1 4/18/2020 1:36:00 AM B68201 Surr: Toluene-d8 105 70-130 %Rec 4/18/2020 1:36:00 AM B68201

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 5

Batch ID

Analytical Report

RL Qual Units DF Date Analyzed

Lab Order: **2004514**Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 2004514

Project: Kaufman No 1

Analyses

Lab ID: 2004514-004 **Collection Date:** 4/9/2020 11:59:00 AM

Result

Client Sample ID: MW4 Matrix: AQUEOUS

EPA METHOD 8260: VOLATILES SHORT LIST Analyst: CCM ND 4/18/2020 2:01:00 AM B68201 Benzene 1.0 μg/L 1 Toluene ND 1.0 μg/L 1 4/18/2020 2:01:00 AM B68201 ND Ethylbenzene 1.0 μg/L 1 4/18/2020 2:01:00 AM B68201 Xylenes, Total ND 4/18/2020 2:01:00 AM B68201 1.5 μg/L 1 70-130 Surr: 1,2-Dichloroethane-d4 100 %Rec 1 4/18/2020 2:01:00 AM B68201 Surr: Dibromofluoromethane 99.2 70-130 %Rec 4/18/2020 2:01:00 AM B68201 Surr: Toluene-d8 104 70-130 %Rec 4/18/2020 2:01:00 AM B68201

Lab ID: 2004514-005 **Collection Date:** 4/9/2020 12:50:00 PM

Client Sample ID: MW5 Matrix: AQUEOUS

Analyses Result **RL Oual Units DF** Date Analyzed **Batch ID EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: CCM Benzene ND 1.0 4/18/2020 2:24:00 AM B68201 µg/L Toluene ND 1.0 µg/L 1 4/18/2020 2:24:00 AM B68201 Ethylbenzene ND B68201 1.0 μg/L 1 4/18/2020 2:24:00 AM Xylenes, Total ND 1.5 μg/L 1 4/18/2020 2:24:00 AM B68201 Surr: 1,2-Dichloroethane-d4 %Rec 98.4 70-130 1 4/18/2020 2:24:00 AM B68201 Surr: Dibromofluoromethane 98.8 70-130 %Rec 4/18/2020 2:24:00 AM B68201 Surr: Toluene-d8 105 70-130 %Rec 4/18/2020 2:24:00 AM B68201

Lab ID: 2004514-006 **Collection Date:** 4/9/2020 1:38:00 PM

Client Sample ID: MW6 Matrix: AQUEOUS

Result **RL Qual Units DF** Date Analyzed **Batch ID Analyses EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: CCM Benzene ND 1.0 4/18/2020 2:48:00 AM B68201 µg/L 1 Toluene ND 1.0 μg/L 1 4/18/2020 2:48:00 AM B68201 Ethylbenzene ND 1.0 μg/L 1 4/18/2020 2:48:00 AM B68201 Xylenes, Total ND 1.5 μg/L 1 4/18/2020 2:48:00 AM B68201 Surr: 1,2-Dichloroethane-d4 94.1 70-130 %Rec 1 4/18/2020 2:48:00 AM B68201 Surr: Dibromofluoromethane 95.6 70-130 %Rec 1 4/18/2020 2:48:00 AM B68201 Surr: Toluene-d8 106 70-130 %Rec 4/18/2020 2:48:00 AM B68201

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 5

CLIENT:

Analytical Report

Lab Order: **2004514**Date Reported: **4/20/2020**

Hall Environmental Analysis Laboratory, Inc.

Timberwolf Environmental Lab Order: 2004514

Project: Kaufman No 1

Lab ID: 2004514-007 **Collection Date:** 4/9/2020 12:51:00 PM

Client Sample ID: Dup Matrix: AQUEOUS

RL Qual Units DF Date Analyzed **Analyses** Result **Batch ID EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: CCM Benzene ND 1.0 4/18/2020 3:12:00 AM B68201 μg/L 1 Toluene ND 1.0 μg/L 4/18/2020 3:12:00 AM B68201 Ethylbenzene ND 1.0 μg/L 1 4/18/2020 3:12:00 AM B68201 Xylenes, Total ND 1.5 μg/L 1 4/18/2020 3:12:00 AM B68201 Surr: 1,2-Dichloroethane-d4 97.8 70-130 %Rec 1 4/18/2020 3:12:00 AM B68201 Surr: Dibromofluoromethane 97.0 70-130 %Rec 4/18/2020 3:12:00 AM B68201 Surr: Toluene-d8 107 70-130 %Rec 4/18/2020 3:12:00 AM B68201

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 5

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004514**

20-Apr-20

Client: Timberwolf Environmental

Project: Kaufman No 1

Sample ID: 100ng lcs2	SampT	ype: LC	S	Tes	tCode: El	PA Method	8260: Volatile	es Short L	ist	
Client ID: LCSW	Batch	n ID: B6	8201	F	RunNo: 6	8201				
Prep Date:	Analysis D	ate: 4/	17/2020	\$	SeqNo: 2	358926	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.6	70	130			
Toluene	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.5	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.8	70	130			
Surr: Dibromofluoromethane	10		10.00		99.8	70	130			
Surr: Toluene-d8	10		10.00		105	70	130			
Sample ID: mb2	SampT	ype: ME	BLK	TestCode: EPA Method 8260: Volatiles Short List					-	

	•	, i								
Client ID: PBW	Batcl	h ID: B6	8201	F	RunNo: 6	8201				
Prep Date:	Analysis D	Date: 4/	17/2020	S	SeqNo: 2	358942	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.0	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.9	70	130			
Surr: Dibromofluoromethane	10		10.00		99.6	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID: 2004514-001ams	SampT	ype: MS	3	Tes	tCode: El	PA Method	8260: Volatile	s Short L	ist	
Client ID: MW1	Batch	1D: B6	8201	F	RunNo: 6	8201				
Prep Date:	Analysis D	ate: 4/	18/2020	8	SeqNo: 2	358960	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.3	70	130			
Toluene	20	1.0	20.00	0	98.2	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.5	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	10		10.00		105	70	130			

Sample ID: 2004514-001amsd	SampT	ype: MS	SD	Tes	tCode: EF	PA Method	8260: Volatile	s Short L	ist	
Client ID: MW1	Batch	ID: B6	8201	F	tunNo: 68	3201				
Prep Date:	Analysis D	ate: 4/	18/2020	8	SeqNo: 2	358961	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.5	70	130	4.29	20	
Toluene	19	1.0	20.00	0	93.6	70	130	4.79	20	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 5

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004514**

20-Apr-20

Client: Timberwolf Environmental

Project: Kaufman No 1

Sample ID: 2004514-001amsd SampType: MSD TestCode: EPA Method 8260: Volatiles Short List

Client ID: **MW1** Batch ID: **B68201** RunNo: **68201**

Prep Date:	Analysis D	ate: 4/	18/2020	S	SeqNo: 2	358961	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.9		10.00	_	99.3	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.7		10.00		96.9	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		99.8	70	130	0	0	
Surr: Toluene-d8	10		10.00		104	70	130	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 5



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name:	TIMBERWOLF ENVIRON	Work Order Number:	200	4514		RcptN	o: 1
Received By:	Desiree Dominguez	4/10/2020 8:10:00 AM			TAZ		
Completed By:	Leah Baca	4/10/2020 9:42:02 AM			In Bac		
Reviewed By:	IO	4/10/20			my from		
Chain of Cus	<u>tody</u>						
1. Is Chain of C	ustody sufficiently complete?		Yes	V	No 🗌	Not Present	
2. How was the	sample delivered?		Cou	rier			
Log In							
	npt made to cool the samples	?	Yes	V	No 🗌	NA 🗆	
4. Were all samp	oles received at a temperatur	e of >0° C to 6.0°C	Yes	~	No 🗌	NA 🗆	
5. Sample(s) in p	proper container(s)?		Yes	~	No 🗆		
6. Sufficient sam	ple volume for indicated test	(s)?	Yes	V	No 🗆		
	except VOA and ONG) prope		Yes	V	No 🗌		
8. Was preserva	tive added to bottles?		Yes		No 🔽	NA 🗆	
9. Received at le	ast 1 vial with headspace <1	4" for AQ VOA?	Yes	V	No 🗆	NA 🗆	
10. Were any san	nple containers received brok	en?	Yes		No 🗹	# of preserved	
11 Dans nanoaus	who wantab battle labation				W. F.	bottles checked	
	ork match bottle labels? Incies on chain of custody)		Yes	V	No 🔲	for pH: (<2)	or >12 unless noted)
12. Are matrices of	correctly identified on Chain of	f Custody?	Yes	V	No 🗌	Adjusted?	
13. Is it clear what	analyses were requested?		Yes	V	No 🗌		
	ng times able to be met? ustomer for authorization.)		Yes	V	No 🗌	Checked by:	DAD 4/10/20
	ing (if applicable)						
	tified of all discrepancies with	this order?	Yes		No 🗆	NA 🗸	
Person	Notified:	Date:	-	_			
By Who	m:	Via:	eM	ail [Phone Fax	☐ In Person	
Regardi	ing:				100000000000000000000000000000000000000		
Client Ir	nstructions:						
16. Additional rer	marks:						
17. <u>Cooler Information</u> Cooler No	Temp °C Condition	Seal Intact Seal No Ses	eal D	ate	Signed By		

Standard Froject Name Froject Name Froject Name Froject Manage Project Manage	Chain-	Chain-of-Custody Record	Turn-Around Time:	ıme:					TA VIA	MINCO	ICE STATE OF
Project Name: Project Name:	Client: 7 m bg	4100	Standard						SIS	ABOR	PATORY
Project #: Pro			Project Name				M	w.hallen	ironme	ntal.com	
Project #: Project #: Tel: 506-345-3875 Fax#: AEC 700Cl	Mailing Address:		Kaut		4	4901 F	Hawkins	1	ondner	lue, NM 871	60
179-324-2139			Project #:			Tel. 5	05-345-3		Fax 50	5-345-4107	
Project Manager: Project Manager: Project Manager: Project Manager:	Phone #: 979.	12-128	HEC-	300Cel				Anal	ysis Re	quest	
Compilance Com	email or Fax#:		Project Mana	iger:				†O:		(tn	
C	QA/QC Package: Standard	☐ Level 4 (Full Validation)	Jim F	oster		AM \ O				əsdA\tr	
Type	n:	☐ Az Compliance	u u	Chael /	Morse	O \ DE	(1.40				
The Matrix Sample Name	'pe)		# of Coolers:	-		(GB	g pc	slate	(
1962 W W Noa Container Preservative HEAL No.			Cooler Temp		10	12D	eţpo	∍M 8	(AO	- 1	
1419 Water NW 1 Voa 2 HCI -001 1132 W MW 3 Voa 2 HCI -003 1132 W MW 4 Voa 2 HCI -003 1159 W MW 5 Voa 2 HCI -003 1250 W MW 6 Voa 2 HCI -003 1251 W DW 0 VOA 2	Time		Container Type and #	Preservative Type	HEAL 2007	08:H9T	EDB (M	В АЯЭЯ	V) 09Z8	G SYLLIN	
1132 W MWZ 1132 W MW3 1159 W MW4 1159 W MW4 1159 W MW6 1159 W MW6 1159 W MW6 1150 W Was 1150 W MW6 1150 W Was 1150 W MW6 1150 W Was 1150 W W W W W W W W W W W W W W W W W W W	616102-6-6			HCI	100-	7					
1132 W MW3 Voa 2 HCI -003 1159 W MW Voa 2 HCI -005 1250 W MW Voa 2 HCI -005 1338 W MW Voa 2 HCI -005 1251 W Dup Voa 2 H	8501 02-6-h			101	-002	2					
1159 W MW 5 Voa 2 HCI -005 1358 W MW 6 Voa 2 HCI -005 1251 W DW W Voa 2 HCI -005 1251 W DW W Voa 1 HCI -005 11me: Relinquished by: Via: Date Time 11me: Relinquished by: Make Mobile Hoppin Ime	2811 2-6-4		100	エンエ	-003	>					
1256 W MW 5 Voa 2 HCI -006 1258 W MW 6 Voa 2 HCI -006 1251 W Dup Voa 2 HCI -007 1251 W Dup Voa 2 HCI -007 1160 W MW 6 Woa 2 HCI -007 1160 W MW 6 Was 100 1160 W MW 6 W W W W W W W W W W W W W W W W				101	500	>					
1338 W MW & Voa 7 HCI -000 125 W Dup Voa 7 HCI -003 125 W Dup Received by: Via: Date Time Peceived by: Via: Date Time Pate Tim				HCI	500-	/					
125 W Dup Voa	8851 02-64	MW		75	900-	>					
Time: Relinquished by: Received by: Via: Date Time Parceived by: Via: Date Parceived by: V	1521026-6			エン	17	>					
Fime: Relinquished by: Received by: Via: Date Time Mount 970.70 160 Fime: Relinquished by: Via: Date Time											
Fime: Relinquished by: Received by: Received by: Received by: Via: Date Time Received by: Via: Date Time Approx 140											
Fime: Relinquished by: Received by: Via: Date Time Math Mat											
Time: Relinquished by: Via: Date T	Fime:	telinquished by:	Received by:	Via:	3/1/2	Remarks:					
	Time:	Colinguished by:	Received by:	£ 3	1						



ANALYTICAL REPORT

April 17, 2020

¹Cp

²Tc

³Ss

*Cn

[©]Sr

⁷Gl

⁸Al

⁹Sc

Timberwolf Environmental, LLC

Sample Delivery Group: L1208080
Samples Received: 04/11/2020
Project Number: HEL-180061
Description: Kaufman No. 1

Report To: Jim Foster

1920 W Villa Maria, Ste 205

Bryan, TX 77807

Entire Report Reviewed By:

Olivia Studebaker
Project Manager

Results relate only to the items tested or calibrated and are regorded as rounded values. This lost report shall not be reproduced, except in full, without written approval of the librariony. Where applicables, sampling conducted by Pace Analytical National is performed per guidance provided in librariony standard operating procedures EN-SOP-MTLL-0068. Where assigning conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Solved to the samples are received.

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
MW1 L1208080-01	5
MW2 L1208080-02	6
MW3 L1208080-03	7
MW4 L1208080-04	8
MW5 L1208080-05	9
MW6 L1208080-06	10
Qc: Quality Control Summary	11
TPH by TCEQ Method 1005	11
GI: Glossary of Terms	12
Al: Accreditations & Locations	13
Sc: Sample Chain of Custody	14







Ss













SAMPLE SUMMARY



			Collected by	Collected date/time		
MW1 L1208080-01 GW			Michael Morse	04/09/20 14:19	04/11/20 08:3	0
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
TPH by TCEQ Method 1005	WG1460456	1	04/14/20 17:30	04/14/20 23:35	AEG	Mt. Juliet, TN
			Collected by	Collected date/time	Received dat	e/time
MW2 L1208080-02 GW			Michael Morse	04/09/20 10:53	04/11/20 08:3	0
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
TPH by TCEQ Method 1005	WG1460456	1	04/14/20 17:30	04/14/20 23:51	AEG	Mt. Juliet, TN
			Collected by	Collected date/time	Received dat	e/time
MW3 L1208080-03 GW			Michael Morse	04/09/20 11:32	04/11/20 08:3	0
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
TPH by TCEQ Method 1005	WG1460456	1	04/14/20 17:30	04/15/20 00:07	AEG	Mt. Juliet, TN
			Collected by	Collected date/time	Received dat	e/time
MW4 L1208080-04 GW			Michael Morse	04/09/20 11:59	04/11/20 08:3	0
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
TPH by TCEQ Method 1005	WG1460456	1	04/14/20 17:30	04/15/20 00:23	AEG	Mt. Juliet, TN
			Collected by	Collected date/time	Received dat	e/time
MW5 L1208080-05 GW			Michael Morse	04/09/20 12:50	04/11/20 08:3	0
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
TPH by TCEQ Method 1005	WG1460456	1	04/14/20 17:30	04/15/20 00:40	AEG	Mt. Juliet, TN
			Collected by	Collected date/time	Received dat	e/time
MW6 L1208080-06 GW			Michael Morse	04/09/20 13:38	04/11/20 08:3	0
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		

WG1460456



















TPH by TCEQ Method 1005

04/14/20 17:30

04/15/20 00:56

AEG

Mt. Juliet, TN

Olivia Studebaker Project Manager

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

¹Cp

















Timberwolf Environmental, LLC

ONE LAB. NAPagevitil of 252

Collected date/time: 04/09/20 14:19

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	04/14/2020 23:35	WG1460456
TPH C12 - C28	U		0.600	0.900	0.900	1	04/14/2020 23:35	WG1460456
TPH C28 - C35	U		0.600	0.900	0.900	1	04/14/2020 23:35	WG1460456
TPH C6 - C35	U		0.600	0.900	0.900	1	04/14/2020 23:35	WG1460456
(S) o-Terphenyl	107				70.0-130		04/14/2020 23:35	WG1460456



















ONE LAB. NAPagev112 of 252

Collected date/time: 04/09/20 10:53

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	04/14/2020 23:51	WG1460456
TPH C12 - C28	U		0.600	0.900	0.900	1	04/14/2020 23:51	WG1460456
TPH C28 - C35	U		0.600	0.900	0.900	1	04/14/2020 23:51	WG1460456
TPH C6 - C35	U		0.600	0.900	0.900	1	04/14/2020 23:51	WG1460456
(S) o-Terphenyl	107				70.0-130		04/14/2020 23:51	WG1460456



















ONE LAB. NAPagevIII of 252

Collected date/time: 04/09/20 11:32

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	04/15/2020 00:07	WG1460456
TPH C12 - C28	U		0.600	0.900	0.900	1	04/15/2020 00:07	WG1460456
TPH C28 - C35	U		0.600	0.900	0.900	1	04/15/2020 00:07	WG1460456
TPH C6 - C35	U		0.600	0.900	0.900	1	04/15/2020 00:07	WG1460456
(S) o-Terphenyl	104				70.0-130		04/15/2020 00:07	WG1460456



















ONE LAB. NAPagev114 of 252

Collected date/time: 04/09/20 11:59

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	04/15/2020 00:23	WG1460456
TPH C12 - C28	U		0.600	0.900	0.900	1	04/15/2020 00:23	WG1460456
TPH C28 - C35	U		0.600	0.900	0.900	1	04/15/2020 00:23	WG1460456
TPH C6 - C35	U		0.600	0.900	0.900	1	04/15/2020 00:23	WG1460456
(S) o-Terphenyl	108				70.0-130		04/15/2020 00:23	WG1460456



















ONE LAB. NAPagevillo of 252

Collected date/time: 04/09/20 12:50

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	04/15/2020 00:40	WG1460456
TPH C12 - C28	U		0.600	0.900	0.900	1	04/15/2020 00:40	WG1460456
TPH C28 - C35	U		0.600	0.900	0.900	1	04/15/2020 00:40	WG1460456
TPH C6 - C35	U		0.600	0.900	0.900	1	04/15/2020 00:40	WG1460456
(S) o-Terphenyl	106				70.0-130		04/15/2020 00:40	WG1460456



















ONE LAB. NAPage 116 of 252

Collected date/time: 04/09/20 13:38

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	04/15/2020 00:56	WG1460456
TPH C12 - C28	U		0.600	0.900	0.900	1	04/15/2020 00:56	WG1460456
TPH C28 - C35	U		0.600	0.900	0.900	1	04/15/2020 00:56	WG1460456
TPH C6 - C35	U		0.600	0.900	0.900	1	04/15/2020 00:56	WG1460456
(S) o-Terphenyl	108				70.0-130		04/15/2020 00:56	WG1460456



















QUALITY CONTROL SUMMARY

ONE LAB. NA Page 117 of 252

TPH by TCEQ Method 1005

L1208080-01,02,03,04,05,06

Method Blank (MB)

(MB) R3518990-1 04/	/14/20 22:14			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
TPH C6 - C12	U		0.600	0.900
TPH C12 - C28	U		0.600	0.900
TPH C28 - C35	U		0.600	0.900
TPH C6 - C35	U		0.600	0.900
(S) o-Terphenyl	109			70.0-130







Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3518990-2 04/14/20 22:30 • (LCSD) R3518990-3 04/14/20 22:46											
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%	
TPH C6 - C12	41.7	38.1	37.7	91.4	90.4	75.0-125			1.06	20	
TPH C12 - C28	41.7	40.6	40.6	97.4	97.4	75.0-125			0.000	20	
TPH C6 - C35	83.4	78.7	78.3	94.4	93.9	75.0-125			0.510	20	
(S) o-Terphenyl				102	102	70.0-130					









Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

Abbreviations and	a Bermillons
MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.























Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Otate / tool caltations	
Alabama	40660
Alaska	17-026
Arizona	AZ0612
Arkansas	88-0469
California	2932
Colorado	TN00003
Connecticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia ¹	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
lowa	364
Kansas	E-10277
Kentucky 16	90010
Kentucky ²	16
Louisiana	Al30792
Louisiana ¹	LA180010
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086

Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey-NELAP	TN002
New Mexico ¹	n/a
New York	11742
North Carolina	Env375
North Carolina 1	DW21704
North Carolina ³	41
North Dakota	R-140
Ohio-VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	LAO00356
South Carolina	84004
South Dakota	n/a
Tennessee 1 4	2006
Texas	T104704245-18-15
Texas ⁵	LAB0152
Utah	TN00003
Vermont	VT2006
Virginia	460132
Washington	C847
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA - ISO 17025 5	1461.02
Canada	1461.01
EPA-Crypto	TN00003

AIHA-LAP,LLC EMLAP	100789
DOD	1461.01
USDA	P330-15-00234

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



















Timberwolf Environ	اعلامه	4 41 4	Billing Info	rmation:				建工工程	Analysis / Con	tainer / Prese	rvative		Chain of Custody Page of			
I MIDERSOLT ENVIRONT	читч		1920	W. Villa	WitanMente Maria St	Pres Chk	5						Pace A National Cet	Analytical * the for Tusting & Innovation		
Report to: Tim Fost	rer	15	Email To:	2 team + imb	perwolf. (oM							12065 Lebanon Rd Mount Juliet, TN 371 Phone: 615-758-585			
Project Description: Kaufman	No. 1			City/State	NM						(A)		Phone: 800-767-585 Fax: 615-758-5859	68080		
Phone: 979-374-2139 Fax:	Client Project HEC-	#	1	Lab Project #			00 5						E2	19		
Collected by (print): Michael Morse	Site/Facility ID)#		P.O.#			2							MEBTX		
Collected by (signature):		ab MUST Be		Quote#			8						Template: Prelogin:			
Immediately Packed on Ice N Y	Next Day Two Day Three D		(Rad Only) y (Rad Only)	Standon	lts Needed	No. of	M						FD.	oliva Studebak		
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	F			100 m () m m (Shipped Via:	Sample # (lab only)		
MWI		GW	N/A	4-9-20	20 1419		V,							-01		
MWZ		GW	1	4-9-70	1053	1	V							02		
MW3	a facility	GW		4-9-20		1	1						E - Jy - M	03		
MWY		GW		4-9-20	1159	1	V						一些一些英雄	64		
MWS		GW.		4-9-20	1250	Z	1			380				05		
MWG		GW		4-9-20	1338	2	V						4	06		
			i nch													
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater WW - WasteWater	Remarks:								pH	Temp	Sample Receipt Checklist COC Seal Present/Intact: MP Y N COC Signed/Accurate: Bottles arrive intact:					
DW - Drinking Water OT - Other						27	SXLI	50	4587	7		Correct bottles used: Sufficient volume sent: If Applicable VOA Zero Headspace: Y N				
Relinquished by : (Signature) Date: Time: 4-10 - Zo 1140					eceived by: (Sign	land-			Trip Blank R	V	s / No ICL / MeoH BR	Preservation Correct/Checked: Y N RAD SCREEN: 05 mR/hr				
Relinquished by: (Signature) Date: Time:					eceived by: (Sign	ature)			12 +.1=	°C Bottle	s Received:	If preservat	If preservation required by Login: Date/Time			
Relinquished by : (Signature)	inquished by : (Signature) Date: Time			Time: Re	eceived for lab by	y: (Signa	turel)	Date:	Time	30	Hold:		Condition: NCF / OK		

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107

Website: clients.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109



July 14, 2020

Jim Foster

Timberwolf Environmental 1920 W Villa Maria Ste 205

Bryan, TX 77807

TEL: (979) 324-2139

FAX:

RE: Kaufman No. 1 OrderNo.: 2007230

Dear Jim Foster:

Hall Environmental Analysis Laboratory received 8 sample(s) on 7/7/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order: 2007230 Date Reported: 7/14/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 2007230 **Project:** Kaufman No. 1

Lab ID: 2007230-001 Collection Date: 7/2/2020 11:50:00 AM

Client Sample ID: MW1 Matrix: GROUNDWATER RL Qual Units DF Date Analyzed **Analyses** Result **Batch ID**

EPA METHOD 8260: VOLATILES SHORT LIST					Analyst:	ССМ
Benzene	ND	1.0	μg/L	1	7/12/2020 3:09:00 PM	SL7026
Toluene	ND	1.0	μg/L	1	7/12/2020 3:09:00 PM	SL7026
Ethylbenzene	ND	1.0	μg/L	1	7/12/2020 3:09:00 PM	SL7026
Xylenes, Total	ND	1.5	μg/L	1	7/12/2020 3:09:00 PM	SL7026
Surr: 1,2-Dichloroethane-d4	103	70-130	%Rec	1	7/12/2020 3:09:00 PM	SL7026
Surr: Dibromofluoromethane	100	70-130	%Rec	1	7/12/2020 3:09:00 PM	SL7026
Surr: Toluene-d8	101	70-130	%Rec	1	7/12/2020 3:09:00 PM	SL7026

Lab ID: Collection Date: 7/2/2020 9:00:00 AM 2007230-002 Client Sample ID: MW2 Matrix: GROUNDWATER

Result

		Analyst:	ССМ
1.0 μg/L	1	7/12/2020 3:34:00 PM	SL7026
1.0 μg/L	1	7/12/2020 3:34:00 PM	SL7026
1.0 μg/L	1	7/12/2020 3:34:00 PM	SL7026
1.5 μg/L	1	7/12/2020 3:34:00 PM	SL7026
130 %Rec	1	7/12/2020 3:34:00 PM	SL7026
130 %Rec	1	7/12/2020 3:34:00 PM	SL7026
130 %Rec	1	7/12/2020 3:34:00 PM	SL7026
-	1.0 µg/L 1.0 µg/L 1.5 µg/L -130 %Rec -130 %Rec	1.0 µg/L 1 1.0 µg/L 1 1.5 µg/L 1 1.30 %Rec 1 1.30 %Rec 1	1.0 μg/L 1 7/12/2020 3:34:00 PM 1.0 μg/L 1 7/12/2020 3:34:00 PM 1.5 μg/L 1 7/12/2020 3:34:00 PM 1.30 %Rec 1 7/12/2020 3:34:00 PM 1.30 %Rec 1 7/12/2020 3:34:00 PM 1.30 %Rec 1 7/12/2020 3:34:00 PM

Lab ID: 2007230-003 Collection Date: 7/2/2020 9:50:00 AM Client Sample ID: MW3 Matrix: GROUNDWATER

Result	RL Qı	ual Units	DF	Date Analyzed	Ba	tch ID
				Ana	alyst:	ССМ
ND	1.0	μg/L	1	7/12/2020 3:59:00	PM	SL7026
ND	1.0	μg/L	1	7/12/2020 3:59:00	PM	SL7026
ND	1.0	μg/L	1	7/12/2020 3:59:00	PM	SL7026
ND	1.5	μg/L	1	7/12/2020 3:59:00	PM	SL7026
105	70-130	%Rec	1	7/12/2020 3:59:00	PM	SL7026
101	70-130	%Rec	1	7/12/2020 3:59:00	PM	SL7026
99.7	70-130	%Rec	1	7/12/2020 3:59:00	PM	SL7026
	ND ND ND ND 105	ND 1.0 ND 1.0 ND 1.0 ND 1.5 105 70-130 101 70-130	ND 1.0 μg/L ND 1.0 μg/L ND 1.0 μg/L ND 1.5 μg/L 105 70-130 %Rec 101 70-130 %Rec	ND 1.0 μg/L 1 ND 1.0 μg/L 1 ND 1.0 μg/L 1 ND 1.5 μg/L 1 105 70-130 %Rec 1 101 70-130 %Rec 1	Ana ND 1.0 μg/L 1 7/12/2020 3:59:00 ND 1.0 μg/L 1 7/12/2020 3:59:00 ND 1.0 μg/L 1 7/12/2020 3:59:00 ND 1.5 μg/L 1 7/12/2020 3:59:00 105 70-130 %Rec 1 7/12/2020 3:59:00 101 70-130 %Rec 1 7/12/2020 3:59:00	Analyst: ND 1.0 μg/L 1 7/12/2020 3:59:00 PM ND 1.0 μg/L 1 7/12/2020 3:59:00 PM ND 1.0 μg/L 1 7/12/2020 3:59:00 PM ND 1.5 μg/L 1 7/12/2020 3:59:00 PM 105 70-130 %Rec 1 7/12/2020 3:59:00 PM 101 70-130 %Rec 1 7/12/2020 3:59:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

Analyses

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

RL Oual Units DF Date Analyzed

- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

Page 1 of 4

Batch ID

Analytical Report

DF Date Analyzed

Batch ID

Lab Order: **2007230**Date Reported: **7/14/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 2007230

Project: Kaufman No. 1

 Lab ID:
 2007230-004
 Collection Date: 7/2/2020 11:05:00 AM

 Client Sample ID:
 MW4
 Matrix: GROUNDWATER

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: CCM ND 7/12/2020 4:23:00 PM SL7026 Benzene 1.0 μg/L 1 Toluene ND 1.0 μg/L 7/12/2020 4:23:00 PM SL7026 ND Ethylbenzene 1.0 μg/L 1 7/12/2020 4:23:00 PM SL7026 Xylenes, Total ND 7/12/2020 4:23:00 PM SL7026 1.5 μg/L 1 105 70-130 Surr: 1,2-Dichloroethane-d4 %Rec 1 7/12/2020 4:23:00 PM SL7026 Surr: Dibromofluoromethane 70-130 %Rec 7/12/2020 4:23:00 PM 102 SL7026 Surr: Toluene-d8 98.7 70-130 %Rec 7/12/2020 4:23:00 PM SL7026

Lab ID:2007230-005Collection Date:7/2/2020 1:44:00 PMClient Sample ID:MW5Matrix:GROUNDWATER

Result

EPA METHOD 8260: VOLATILES SHORT LIST Analyst: CCM ND 7/12/2020 4:48:00 PM Benzene 1.0 SL7026 µg/L Toluene ND 1.0 µg/L 1 7/12/2020 4:48:00 PM SL7026 Ethylbenzene ND 7/12/2020 4:48:00 PM SL7026 1.0 μg/L 1 Xylenes, Total ND 1.5 μg/L 1 7/12/2020 4:48:00 PM SL7026 Surr: 1,2-Dichloroethane-d4 %Rec 106 70-130 1 7/12/2020 4:48:00 PM SL7026 Surr: Dibromofluoromethane 101 70-130 %Rec 7/12/2020 4:48:00 PM SL7026 Surr: Toluene-d8 99.8 70-130 %Rec 7/12/2020 4:48:00 PM SL7026

RL Oual Units

 Lab ID:
 2007230-006
 Collection Date:
 7/2/2020 12:53:00 PM

 Client Sample ID:
 MW6
 Matrix:
 GROUNDWATER

Result **RL Qual Units DF** Date Analyzed **Batch ID Analyses EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: CCM Benzene ND 1.0 7/12/2020 5:13:00 PM SL7026 µg/L 1 Toluene ND 1.0 μg/L 1 7/12/2020 5:13:00 PM SL7026 Ethylbenzene ND 1.0 μg/L 1 7/12/2020 5:13:00 PM SL7026 Xylenes, Total ND 1.5 μg/L 1 7/12/2020 5:13:00 PM SL7026 Surr: 1,2-Dichloroethane-d4 103 70-130 %Rec 1 7/12/2020 5:13:00 PM SL7026 Surr: Dibromofluoromethane 101 70-130 %Rec 1 7/12/2020 5:13:00 PM SL7026 Surr: Toluene-d8 100 70-130 %Rec 1 7/12/2020 5:13:00 PM SL7026

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

Analyses

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 4

Analytical Report

Lab Order: 2007230

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/14/2020

CLIENT: Timberwolf Environmental Lab Order: 2007230

Project: Kaufman No. 1

Lab ID: 2007230-007 **Collection Date:** 7/2/2020 1:44:00 PM

Client Sample ID: DUP Matrix: GROUNDWATER

RL Qual Units DF Date Analyzed **Analyses** Result **Batch ID EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: CCM Benzene ND 1.0 7/12/2020 5:37:00 PM SL7026 μg/L 1 Toluene ND 1.0 μg/L 7/12/2020 5:37:00 PM SL7026 Ethylbenzene ND 1.0 μg/L 1 7/12/2020 5:37:00 PM SL7026 Xylenes, Total ND 1.5 μg/L 1 7/12/2020 5:37:00 PM SL7026 107 70-130 %Rec Surr: 1,2-Dichloroethane-d4 1 7/12/2020 5:37:00 PM SL7026 Surr: Dibromofluoromethane 102 70-130 %Rec 7/12/2020 5:37:00 PM SL7026 Surr: Toluene-d8 99.0 70-130 %Rec 7/12/2020 5:37:00 PM SL7026

Lab ID: 2007230-008 Collection Date:

Client Sample ID: Trip Blank Matrix: GROUNDWATER

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch II)
EPA METHOD 8260: VOLATILES SHORT LIST					Ana	lyst: CCM	
Benzene	ND	1.0	μg/L	1	7/12/2020 6:02:00 F	PM SL702	26
Toluene	ND	1.0	μg/L	1	7/12/2020 6:02:00 F	PM SL702	26
Ethylbenzene	ND	1.0	μg/L	1	7/12/2020 6:02:00 F	PM SL702	26
Xylenes, Total	ND	1.5	μg/L	1	7/12/2020 6:02:00 F	PM SL702	26
Surr: 1,2-Dichloroethane-d4	104	70-130	%Rec	1	7/12/2020 6:02:00 F	PM SL702	26
Surr: Dibromofluoromethane	100	70-130	%Rec	1	7/12/2020 6:02:00 F	PM SL702	26
Surr: Toluene-d8	99.1	70-130	%Rec	1	7/12/2020 6:02:00 F	PM SL702	26

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 4

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2007230**

14-Jul-20

Client: Timberwolf Environmental

Project: Kaufman No. 1

Sample ID: 100ng Ics	SampT	ype: LC	s	TestCode: EPA Method 8260: Volatiles Short List									
Client ID: LCSW	Batch	ID: SL	70266	F	RunNo: 7								
Prep Date:	Analysis D	ate: 7/	12/2020	S	SeqNo: 2	442593	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	19	1.0	20.00	0	96.6	70	130						
Toluene	20	1.0	20.00	0	101	70	130						
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130						
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130						
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130						
Surr: Toluene-d8	10		10.00		99.8	70	130						

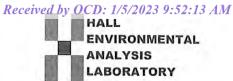
Sample ID: mb	SampT	pType: MBLK TestCode: EPA Method 8260: Volatiles Short List															
Client ID: PBW	Client ID: PBW Batch ID: SL70266 RunNo: 70266																
Prep Date:	Analysis D	Date: 7/	12/2020	8	SeqNo: 2	442594	Units: µg/L										
Analyte	Result	PQL SPK val		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual							
Benzene	ND	1.0															
Toluene	ND	1.0															
Ethylbenzene	ND	1.0															
Xylenes, Total	ND	1.5															
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130										
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130										
Surr: Dibromofluoromethane	10		10.00		99.8	70	130										
Surr: Toluene-d8	9.9		10.00		99.1	70	130										

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 4



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name:	Timberwolf Environmental	Work Order Number:	200	7230			RcptNo: 1
Received By:	Scott Anderson	7/7/2020 8:25:00 AM					
Completed By:	Emily Mocho	7/7/2020 8:48:20 AM					
Reviewed By:	JR 717 176						
Chain of Cus							
1. Is Chain of Cu	ustody complete?		Yes	V	No		Not Present
2. How was the	sample delivered?		Cou	rier			
Log In							
	pt made to cool the samples?		Yes	V	No		NA 🗆
4. Were all samp	oles received at a temperature	of >0° C to 6.0°C	Yes	V	No		NA 🗆
5. Sample(s) in p	proper container(s)?		Yes	V	No		
6. Sufficient sam	ple volume for indicated test(s)?	Yes	~	No		
7. Are samples (except VOA and ONG) proper	ly preserved?	Yes	~	No		
8. Was preservat	tive added to bottles?		Yes		No	V	NA 🗆
9. Received at le	ast 1 vial with headspace <1/4	" for AQ VOA?	Yes	v	No		NA 🗌
10. Were any sam	nple containers received broke	n?	Yes		No	V	# of preserved
	ork match bottle labels? ancies on chain of custody)		Yes	V	No		bottles checked for pH: (<2 or ≥12 unless noted)
	correctly identified on Chain of	Custody?	Yes	~	No		Adjusted?
3. Is it clear what	analyses were requested?		Yes	V	No		101-
	ng times able to be met? ustomer for authorization.)		Yes	V	No		Checked by: SH + 7
	ing (if applicable)						
	tified of all discrepancies with	this order?	Yes		No		NA 🗹
Person	Notified:	Date:		-		-	
By Who	om:	Via:	eM	ail [Phone	Fax	☐ In Person
Regardi	ing:						
Client In	nstructions:						
16. Additional rer	marks:						
17. Cooler Information Cooler No	Temp °C Condition S	eal Intact Seal No S t Present	eal D	ate	Signed	Ву	

NTAL ATORY			9:52	2:13 A	IM															Pag	ve 127 of
L ENVIRONMENTAL	www.italietivitofiffiefital.com ns NE - Albuquerque, NM 87109		nhavi sień				1 , ₆	-AC	3r, <i>N</i> VOA)	CI, F, E 8260 (/ 8270 (S Total C											Date Time
HALL	www.n 4901 Hawkins NE	Tel. 505-345-3975	(s's:	Эd	280 ۱۰.	8/s 504	ebi: bc	estic letho	7PH:808 8081 P PAHs b PAHs b										ırks:	
				(1208						A 4 . S. 4 P. L.	>	>	>	>	>,	>	>	>		Remarks:	
	1 No. 1	130081	3		7.	Horse	□ No		(0.) 9.5=0-9	LOUTZ3C	100-	-002	-003	h00-	500-	-000	-007	800-		Date Time (500)	
Time:	autma	1			Foste	Michael	Z Yes	}	Vi	Preservative Type	オクニ	HCI	エこ	HCI	174	れこ	HCI	HCI		via:	Via:
Turn-Around Time: Standard Project Name:	X	Project #:	Project Manager	Light Malia	W C IN	Sampler: M	On Ice:	# of Coolers:	Cooler Temp(including CF):	Container Type and #		VOA 3	VOA 3	VOA 3	Vot 3	VOA 3	8 4 W	2 40N		Received by:	Received by:
Chain-of-Custody Record	W. Villa Maria	Drya, TX 19807	Jun Limber will	TO HOS BUILDING	□ Level 4 (Full Validation)	npliance				Sample Name	MW (2 MW	MW3	h mi	MWS	MW G	Dup	Trip Blank		d by:	Time: Relinquished by: Not Amoth Cooke Second by: Via:
hain-of-Cu	024	, 5	B			☐ Az Compliance	□ Other			Matrix	GW	_					4			Relinquished by:	Relinquished by:
Chain-	Mailing Address: 19'20	# 205	#X#:	ai	Standard	ou:		EDD (Type)		Time	1150	000 2	0620	1105	1344	85210	ph 21 02-2-6	0		ime: 1500	Time: F
oleased to Ima		1/6/20 # # # # # # # # # # # # # # # # # # #	email	QAVQC	Sta	Accred				Date	02-7-6	2-2-6	02-2-6	02-2-6	02-2-6	02-2-6	2-2-6	224		Date: 7-7-7	Date: $\sqrt{ \psi _{202}}$



ANALYTICAL REPORT

July 13, 2020

Ss

Cn

Sr

СQс Gl

ΑI

Sc

Timberwolf Environmental, LLC

Sample Delivery Group: L1236413

Samples Received: 07/03/2020

Project Number: HEL-180061

Description: Kaufman No. 1

Report To: Jim Foster

1920 W Villa Maria, Ste 205

Bryan, TX 77807

Entire Report Reviewed By:

Olivia Studebaker

Project Manager Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
MW 1 L1236413-01	5
MW 2 L1236413-02	6
MW 3 L1236413-03	7
MW 4 L1236413-04	8
MW 5 L1236413-05	9
MW 6 L1236413-06	10
Qc: Quality Control Summary	11
TPH by TCEQ Method 1005	11
GI: Glossary of Terms	12
Al: Accreditations & Locations	13
Sc: Sample Chain of Custody	14





















SAMPLE SUMMARY



			Collected by	Collected date/time	Docoived do	to/timo
MW 1 L1236413-01 GW			Michael Morse	07/02/20 00:00	07/03/20 08	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1505807	1	07/09/20 06:00	07/09/20 16:56	FM	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
MW 2 L1236413-02 GW			Michael Morse	07/02/20 00:00	07/03/20 08	:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1505807	1	07/09/20 06:00	07/09/20 16:56	FM	Mt. Juliet, TN
NIN 0 14000 440 00 00 0			Collected by Michael Morse	Collected date/time 07/02/20 00:00	Received da 07/03/20 08	
MW 3 L1236413-03 GW				01102120 00.00	01103120 00	. 10
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1505807	1	07/09/20 06:00	07/09/20 17:13	FM	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
MW 4 L1236413-04 GW			Michael Morse	07/02/20 00:00	07/03/20 08	:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1505807	1	07/09/20 06:00	07/09/20 17:13	FM	Mt. Juliet, TN
MW 5 L1236413-05 GW			Collected by Michael Morse	Collected date/time 07/02/20 00:00	Received da 07/03/20 08	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1505807	1	07/09/20 06:00	07/09/20 17:29	FM	Mt. Juliet, TN
MW 6 L1236413-06 GW			Collected by Michael Morse	Collected date/time 07/02/20 00:00	Received da 07/03/20 08	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location

WG1505807

1.05

07/09/20 06:00

07/09/20 17:29

FM

Mt. Juliet, TN



















Olivia Studebaker Project Manager

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

¹Cp

















Timberwolf Environmental, LLC

ONE LAB. NAPagev132 of 252

Collected date/time: 07/02/20 00:00

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	07/09/2020 16:56	WG1505807
TPH C12 - C28	U		0.600	0.900	0.900	1	07/09/2020 16:56	WG1505807
TPH C28 - C35	U		0.600	0.900	0.900	1	07/09/2020 16:56	WG1505807
TPH C6 - C35	U		0.600	0.900	0.900	1	07/09/2020 16:56	WG1505807
(S) o-Terphenyl	118				70.0-130		07/09/2020 16:56	WG1505807



















ONE LAB. NAPage 133 of 252

Collected date/time: 07/02/20 00:00

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	07/09/2020 16:56	WG1505807
TPH C12 - C28	U		0.600	0.900	0.900	1	07/09/2020 16:56	WG1505807
TPH C28 - C35	U		0.600	0.900	0.900	1	07/09/2020 16:56	WG1505807
TPH C6 - C35	U		0.600	0.900	0.900	1	07/09/2020 16:56	WG1505807
(S) o-Terphenyl	108				70.0-130		07/09/2020 16:56	WG1505807



















ONE LAB. NAPagev134 of 252

Collected date/time: 07/02/20 00:00

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	07/09/2020 17:13	WG1505807
TPH C12 - C28	U		0.600	0.900	0.900	1	07/09/2020 17:13	WG1505807
TPH C28 - C35	U		0.600	0.900	0.900	1	07/09/2020 17:13	WG1505807
TPH C6 - C35	U		0.600	0.900	0.900	1	07/09/2020 17:13	WG1505807
(S) o-Terphenyl	115				70.0-130		07/09/2020 17:13	WG1505807



















ONE LAB. NAPagev135 of 252

Collected date/time: 07/02/20 00:00

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	07/09/2020 17:13	WG1505807
TPH C12 - C28	U		0.600	0.900	0.900	1	07/09/2020 17:13	WG1505807
TPH C28 - C35	U		0.600	0.900	0.900	1	07/09/2020 17:13	WG1505807
TPH C6 - C35	U		0.600	0.900	0.900	1	07/09/2020 17:13	WG1505807
(S) o-Terphenyl	106				70.0-130		07/09/2020 17:13	WG1505807



















ONE LAB. NAPage 136 of 252

Collected date/time: 07/02/20 00:00

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	07/09/2020 17:29	WG1505807
TPH C12 - C28	U		0.600	0.900	0.900	1	07/09/2020 17:29	WG1505807
TPH C28 - C35	U		0.600	0.900	0.900	1	07/09/2020 17:29	WG1505807
TPH C6 - C35	U		0.600	0.900	0.900	1	07/09/2020 17:29	WG1505807
(S) o-Terphenyl	120				70.0-130		07/09/2020 17:29	WG1505807



















ONE LAB. NAPagev137 of 252

Collected date/time: 07/02/20 00:00

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.630	0.900	0.945	1.05	07/09/2020 17:29	WG1505807
TPH C12 - C28	U		0.630	0.900	0.945	1.05	07/09/2020 17:29	WG1505807
TPH C28 - C35	U		0.630	0.900	0.945	1.05	07/09/2020 17:29	WG1505807
TPH C6 - C35	U		0.630	0.900	0.945	1.05	07/09/2020 17:29	WG1505807
(S) o-Terphenyl	105				70.0-130		07/09/2020 17:29	WG1505807



















QUALITY CONTROL SUMMARY

ONE LAB. NAPagev138 of 252

TPH by TCEQ Method 1005

L1236413-01,02,03,04,05,06

Method Blank (MB)

(MB) R3548367-1 07	/09/20 16:05			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
TPH C6 - C12	U		0.600	0.900
TPH C12 - C28	U		0.600	0.900
TPH C28 - C35	U		0.600	0.900
TPH C6 - C35	U		0.600	0.900
(S) o-Terphenyl	116			70.0-130



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3548367-2 07/09/20 16:22 • (LCSD) R3548367-3 07/09/20 16:39											
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%	
TPH C6 - C12	41.7	37.0	37.3	88.7	89.4	75.0-125			0.808	20	
TPH C12 - C28	41.7	40.4	40.3	96.9	96.6	75.0-125			0.248	20	
TPH C6 - C35	83.4	77.4	77.6	92.8	93.0	75.0-125			0.258	20	
(S) o-Terphenyl				112	114	70.0-130					











Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

Abbreviations and	a Bermillons
MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.























Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660
Alaska	17-026
Arizona	AZ0612
Arkansas	88-0469
California	2932
Colorado	TN00003
Connecticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia ¹	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
lowa	364
Kansas	E-10277
Kentucky ^{1 6}	90010
Kentucky ²	16
Louisiana	Al30792
Louisiana ¹	LA180010
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086

Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey-NELAP	TN002
New Mexico ¹	n/a
New York	11742
North Carolina	Env375
North Carolina 1	DW21704
North Carolina ³	41
North Dakota	R-140
Ohio-VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	LAO00356
South Carolina	84004
South Dakota	n/a
Tennessee 1 4	2006
Texas	T104704245-18-15
Texas ⁵	LAB0152
Utah	TN00003
Vermont	VT2006
Virginia	460132
Washington	C847
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA - ISO 17025 5	1461.02
Canada	1461.01
EPA-Crypto	TN00003

AIHA-LAP,LLC EMLAP	100789
DOD	1461.01
USDA	P330-15-00234

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



















(12.1. 12.1. 12.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 1 (13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 13.1. 1			Billing Inform	nation:		T		Anal	ysis / Contain	er / Preservati	ve		Chain of Custody	Page of
		A STATE OF THE PARTY OF THE PAR			\	Pres		图					0	
			Timber	wolf En	Vironmental Maria #7	Chk						1000	Pace A	Analytical *
			1450 M	villa /	TOTION II	205								
		1,20	Bryon	ITX. T	1801						N. C.			ENSOES !
Report to: Jim Foste	(Email To:	teantim	berwolf.	Com							12065 Lebanon Rd Mount Juliet, TN 373 Phone: 615-758-585 Phone: 800-767-585	8
Project Description: Kaufman	No. 1				UM								Fax: 615-758-5859	36413
Phone:	Client Project #	- 20		Lab Project #								麗	L# 610	E179
Fax:	HEC-	18001	61				N						Table #	LITS
Collected by (print):	Site/Facility ID #			P.O. #			00						Acctnum: T	MENBIX
Michael Morse Collected by (signature):	Rush? (Lab	MUST Be I	Notified)	Quote #									Template:	
1 1 11	Same Day	Five D	ay			177	8						Prelogin:	-11.12
Immediately		5 Day 10 Da	(Rad Only) y (Rad Only)		ults Needed	No.	ш						TSR: 825 -0	olivia Studebaker
Packed on Ice N Y_	Three Day			Standar	0	of	3	076		186			Shipped Via:	7(1000110
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	+						Remarks	Sample # (lab only)
MWI	1150	GW	NA	7-20-20		3	1							-61
MWZ	900	1	1	7-2-20)	2	V,		LE TH	3 - 10	1			02
Mw 3	950		B. 17.	7-2-20		2	V,				100 h			03
MWY	1105			7-2-20	0	2	/							04
MW 5	1344			7-2-20		2	V.							05
	1253	-		7-7-70		2	/			- 169				06
MW 6	107		-	1-2-0		-					1			
		A.												
				1						100				
* Martin	Remarks:							25.20	301			S	ample Receipt C	hecklist/
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay	Remarks.								71	_ Temp	5). <u> </u>	COC Sign	ed/Accurate: arrive intact:	hecklist y N
WW - WasteWater DW - Drinking Water	Samples returns	ed via:	Tail Tail	STATE OF THE PARTY.	*			11 1	Flow	_ Other			bottles used: nt volume sent:	
OT - Other	UPS Fed		ırler		Fracking # 17	50	000	02	5689		2		If Applicat Headspace:	YN
Relinquished by : (Signature)		Date:	YARRON YOUR SHARE		Received by: (Sign	ature)		Tr	ip Blank Rece	ived: Yes N	МеоН	Preserva	tion Correct/Ch	ecked: _Y _N
MI M		7-2-	05	1630				1	-	TBR			D SCREEN:	
Relinquished by : (Signature)		Date:	1	rime: F	Received by: (Sign	nature)		T	7-1=6	Bottles Re	ceived:	If preserva	ation required by Lo	gin: Date/Time
Relinquished by : (Signature)		Date:		Γime: F	Received for lab b	y: (Signa	ature)	D	ate:	Time:	111	Hold:		Condition: NCF / OK
Released to Imaging: 1/6/202	23 3:54:27 PA	M .		1	1 1	La.		=	7-7-71	1 18	05			NCF / OK



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

November 16, 2020

Jim Foster Timberwolf Environmental 1920 W Villa Maria Ste 205 Bryan, TX 77807

TEL: (979) 324-2139

FAX:

RE: Kaufman OrderNo.: 2011429

Dear Jim Foster:

Hall Environmental Analysis Laboratory received 8 sample(s) on 11/6/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report Lab Order 2011429

Date Reported: 11/16/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Client Sample ID: MW1

 Project:
 Kaufman
 Collection Date: 11/5/2020 2:40:00 PM

 Lab ID:
 2011429-001
 Matrix: GROUNDWA
 Received Date: 11/6/2020 7:58:00 AM

Analyses	Result RL Qual Units			DF	Batch	
EPA METHOD 8260: VOLATILES SHORT LIST					Analyst	ССМ
Benzene	ND	1.0	μg/L	1	11/15/2020 3:26:00 AM	SL73360
Toluene	ND	1.0	μg/L	1	11/15/2020 3:26:00 AM	SL73360
Ethylbenzene	ND	1.0	μg/L	1	11/15/2020 3:26:00 AM	SL73360
Xylenes, Total	ND	1.5	μg/L	1	11/15/2020 3:26:00 AM	SL73360
Surr: 1,2-Dichloroethane-d4	104	70-130	%Rec	1	11/15/2020 3:26:00 AM	SL73360
Surr: Dibromofluoromethane	102	70-130	%Rec	1	11/15/2020 3:26:00 AM	SL73360
Surr: Toluene-d8	97.3	70-130	%Rec	1	11/15/2020 3:26:00 AM	SL73360

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 10

Analytical Report Lab Order 2011429

Date Reported: 11/16/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Client Sample ID: MW2

 Project:
 Kaufman
 Collection Date: 11/5/2020 10:48:00 AM

 Lab ID:
 2011429-002
 Matrix: GROUNDWA
 Received Date: 11/6/2020 7:58:00 AM

Analyses	Result RL Qual Un			DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST					Analyst	ССМ
Benzene	ND	1.0	μg/L	1	11/15/2020 3:50:00 AM	SL73360
Toluene	ND	1.0	μg/L	1	11/15/2020 3:50:00 AM	SL73360
Ethylbenzene	ND	1.0	μg/L	1	11/15/2020 3:50:00 AM	SL73360
Xylenes, Total	ND	1.5	μg/L	1	11/15/2020 3:50:00 AM	SL73360
Surr: 1,2-Dichloroethane-d4	104	70-130	%Rec	1	11/15/2020 3:50:00 AM	SL73360
Surr: Dibromofluoromethane	100	70-130	%Rec	1	11/15/2020 3:50:00 AM	SL73360
Surr: Toluene-d8	96.8	70-130	%Rec	1	11/15/2020 3:50:00 AM	SL73360

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 10

Date Reported: 11/16/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Client Sample ID: MW3

 Project:
 Kaufman
 Collection Date: 11/5/2020 11:40:00 AM

 Lab ID:
 2011429-003
 Matrix: GROUNDWA
 Received Date: 11/6/2020 7:58:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST					Analyst	ССМ
Benzene	ND	1.0	μg/L	1	11/15/2020 4:13:00 AM	SL73360
Toluene	ND	1.0	μg/L	1	11/15/2020 4:13:00 AM	SL73360
Ethylbenzene	ND	1.0	μg/L	1	11/15/2020 4:13:00 AM	SL73360
Xylenes, Total	ND	1.5	μg/L	1	11/15/2020 4:13:00 AM	SL73360
Surr: 1,2-Dichloroethane-d4	103	70-130	%Rec	1	11/15/2020 4:13:00 AM	SL73360
Surr: Dibromofluoromethane	100	70-130	%Rec	1	11/15/2020 4:13:00 AM	SL73360
Surr: Toluene-d8	97.8	70-130	%Rec	1	11/15/2020 4:13:00 AM	SL73360

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 10

Date Reported: 11/16/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Client Sample ID: MW4

 Project:
 Kaufman
 Collection Date: 11/5/2020 12:15:00 PM

 Lab ID:
 2011429-004
 Matrix: GROUNDWA
 Received Date: 11/6/2020 7:58:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST					Analyst	CCM
Benzene	ND	1.0	μg/L	1	11/15/2020 4:36:00 AM	SL73360
Toluene	ND	1.0	μg/L	1	11/15/2020 4:36:00 AM	SL73360
Ethylbenzene	ND	1.0	μg/L	1	11/15/2020 4:36:00 AM	SL73360
Xylenes, Total	ND	1.5	μg/L	1	11/15/2020 4:36:00 AM	SL73360
Surr: 1,2-Dichloroethane-d4	104	70-130	%Rec	1	11/15/2020 4:36:00 AM	SL73360
Surr: Dibromofluoromethane	101	70-130	%Rec	1	11/15/2020 4:36:00 AM	SL73360
Surr: Toluene-d8	97.6	70-130	%Rec	1	11/15/2020 4:36:00 AM	SL73360

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 10

Date Reported: 11/16/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Client Sample ID: MW5

 Project:
 Kaufman
 Collection Date: 11/5/2020 1:36:00 PM

 Lab ID:
 2011429-005
 Matrix: GROUNDWA
 Received Date: 11/6/2020 7:58:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST					Analyst	CCM
Benzene	ND	1.0	μg/L	1	11/15/2020 4:59:00 AM	SL73360
Toluene	ND	1.0	μg/L	1	11/15/2020 4:59:00 AM	SL73360
Ethylbenzene	ND	1.0	μg/L	1	11/15/2020 4:59:00 AM	SL73360
Xylenes, Total	ND	1.5	μg/L	1	11/15/2020 4:59:00 AM	SL73360
Surr: 1,2-Dichloroethane-d4	101	70-130	%Rec	1	11/15/2020 4:59:00 AM	SL73360
Surr: Dibromofluoromethane	97.4	70-130	%Rec	1	11/15/2020 4:59:00 AM	SL73360
Surr: Toluene-d8	96.9	70-130	%Rec	1	11/15/2020 4:59:00 AM	SL73360

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 10

Date Reported: 11/16/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Client Sample ID: MW6

 Project:
 Kaufman
 Collection Date: 11/5/2020 12:48:00 PM

 Lab ID:
 2011429-006
 Matrix: GROUNDWA
 Received Date: 11/6/2020 7:58:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST					Analyst	ССМ
Benzene	ND	1.0	μg/L	1	11/15/2020 5:23:00 AM	SL73360
Toluene	ND	1.0	μg/L	1	11/15/2020 5:23:00 AM	SL73360
Ethylbenzene	ND	1.0	μg/L	1	11/15/2020 5:23:00 AM	SL73360
Xylenes, Total	ND	1.5	μg/L	1	11/15/2020 5:23:00 AM	SL73360
Surr: 1,2-Dichloroethane-d4	103	70-130	%Rec	1	11/15/2020 5:23:00 AM	SL73360
Surr: Dibromofluoromethane	100	70-130	%Rec	1	11/15/2020 5:23:00 AM	SL73360
Surr: Toluene-d8	94.8	70-130	%Rec	1	11/15/2020 5:23:00 AM	SL73360

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 6 of 10

Date Reported: 11/16/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Client Sample ID: DUP

Project: Kaufman

Collection Date: 11/5/2020

Lab ID: 2011429-007 **Matrix:** GROUNDWA **Received Date:** 11/6/2020 7:58:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST					Analyst	CCM
Benzene	ND	1.0	μg/L	1	11/15/2020 5:46:00 AM	SL73360
Toluene	ND	1.0	μg/L	1	11/15/2020 5:46:00 AM	SL73360
Ethylbenzene	ND	1.0	μg/L	1	11/15/2020 5:46:00 AM	SL73360
Xylenes, Total	ND	1.5	μg/L	1	11/15/2020 5:46:00 AM	SL73360
Surr: 1,2-Dichloroethane-d4	103	70-130	%Rec	1	11/15/2020 5:46:00 AM	SL73360
Surr: Dibromofluoromethane	99.6	70-130	%Rec	1	11/15/2020 5:46:00 AM	SL73360
Surr: Toluene-d8	97.1	70-130	%Rec	1	11/15/2020 5:46:00 AM	SL73360

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 7 of 10

Date Reported: 11/16/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Client Sample ID: Trip Blank

Project: Kaufman Collection Date:

Lab ID: 2011429-008 **Matrix:** GROUNDWA **Received Date:** 11/6/2020 7:58:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST					Analyst	: CCM
Benzene	ND	1.0	μg/L	1	11/15/2020 7:42:00 AM	S73360
Toluene	ND	1.0	μg/L	1	11/15/2020 7:42:00 AM	S73360
Ethylbenzene	ND	1.0	μg/L	1	11/15/2020 7:42:00 AM	S73360
Xylenes, Total	ND	1.5	μg/L	1	11/15/2020 7:42:00 AM	S73360
Surr: 1,2-Dichloroethane-d4	99.0	70-130	%Rec	1	11/15/2020 7:42:00 AM	S73360
Surr: Dibromofluoromethane	99.3	70-130	%Rec	1	11/15/2020 7:42:00 AM	S73360
Surr: Toluene-d8	97.2	70-130	%Rec	1	11/15/2020 7:42:00 AM	S73360

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 8 of 10

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2011429 16-Nov-20**

Client: Timberwolf Environmental

Project: Kaufman

SampT	ype: LC	s	Tes	tCode: El	PA Method	8260: Volatile	es Short L	ist	
Batch	Batch ID: SL73360				3360				
Analysis D	ate: 11	/14/2020	S	SeqNo: 2	582625	Units: µg/L			
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
20	1.0	20.00	0	97.8	70	130			
19	1.0	20.00	0	96.1	70	130			
10		10.00		104	70	130			
10		10.00		103	70	130			
10		10.00		99.5	70	130			
9.6		10.00		96.3	70	130			
SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8260: Volatile	es Short L	.ist	
Batch	ID: SL	73360	F	RunNo: 7 :	3360				
Analysis D	ate: 11	/14/2020	8	SeqNo: 2	582626	Units: µg/L			
	Batch Analysis D Result 20 19 10 10 9.6 SampT	Batch ID: SL Analysis Date: 11 Result PQL 20 1.0 19 1.0 10 10 9.6 SampType: ME Batch ID: SL	Analysis Date: 11/14/2020 Result PQL SPK value 20 1.0 20.00 19 1.0 20.00 10 10.00 10.00 10 10.00 10.00 9.6 10.00 10.00 SampType: MBLK Batch ID: SL73360	Batch ID: SL73360 F Analysis Date: 11/14/2020 SPK value SPK Ref Val Result PQL SPK value SPK Ref Val 20 1.0 20.00 0 19 1.0 20.00 0 10 10.00 0 10 10.00 0 9.6 10.00 10.00 SampType: MBLK Tes Batch ID: SL73360 F	Batch ID: SL73360 RunNo: 73 Analysis Date: 11/14/2020 SeqNo: 25 Result PQL SPK value SPK Ref Val %REC 20 1.0 20.00 0 97.8 19 1.0 20.00 0 96.1 10 10.00 104 10 10.00 99.5 9.6 10.00 96.3 SampType: MBLK TestCode: Element of the part of the	Batch ID: SL73360 RunNo: 73360 Analysis Date: 11/14/2020 SeqNo: 2582625 Result PQL SPK value SPK Ref Val %REC LowLimit 20 1.0 20.00 0 97.8 70 19 1.0 20.00 0 96.1 70 10 10.00 104 70 10 10.00 103 70 10 10.00 99.5 70 96.3 70 SampType: MBLK TestCode: EPA Method Batch ID: SL73360	Batch ID: SL73360 RunNo: 73360 Analysis Date: 11/14/2020 SeqNo: 2582625 Units: μg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 20 1.0 20.00 0 97.8 70 130 19 1.0 20.00 0 96.1 70 130 10 10.00 104 70 130 10 10.00 103 70 130 10 10.00 99.5 70 130 96.6 10.00 96.3 70 130 SampType: MBLK TestCode: EPA Method 8260: Volatile Batch ID: SL73360 RunNo: 73360	Batch ID: SL73360 RunNo: 73360 Analysis Date: 11/14/2020 SeqNo: 2582625 Units: μg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD 20 1.0 20.00 0 97.8 70 130 19 1.0 20.00 0 96.1 70 130 10 10.00 104 70 130 10 10.00 103 70 130 10 10.00 99.5 70 130 96.6 10.00 96.3 70 130 SampType: MBLK TestCode: EPA Method 8260: Volatiles Short L Batch ID: SL73360	Batch ID: SL73360 RunNo: 73360 Analysis Date: 11/14/2020 SeqNo: 2582625 Units: µg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit 20 1.0 20.00 0 97.8 70 130 19 1.0 20.00 0 96.1 70 130 10 10.00 0 96.1 70 130 10 10.00 103 70 130 10 10.00 99.5 70 130 96. 10.00 96.3 70 130 SampType: MBLK TestCode: EPA Method 8260: Volatiles Short List Batch ID: SL73360

Client ID: PBW	Datci	טווט: 3 L	.73360	Г	Kunino. 7	3360				
Prep Date:	Analysis D	Date: 11	1/14/2020	9	SeqNo: 2	582626	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.7		10.00		97.4	70	130			

Sample ID: 100ng lcs2	SampT	ype: LC	s	TestCode: EPA Method				es Short L	ist	
Client ID: LCSW	Batch	n ID: S7	3360	F	RunNo: 7 :	3360				
Prep Date:	Analysis D)ate: 11	/15/2020	5	SeqNo: 2	582673	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.5	70	130			
Toluene	19	1.0	20.00	0	97.2	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.8		10.00		98.1	70	130			

Sample ID: mb2	SampTy	/pe: ME	BLK	Tes	tCode: El	PA Method	8260: Volatile	s Short L	.ist	
Client ID: PBW	Batch	ID: S7	3360	R	RunNo: 7 :	3360				
Prep Date:	Analysis Da	ate: 11	/15/2020	S	SeqNo: 2	582674	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 9 of 10

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2011429 16-Nov-20**

Client: Timberwolf Environmental

Project: Kaufman

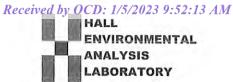
Sample ID: mb2 Client ID: PBW	•	SampType: MBLK Batch ID: S73360									
Prep Date:	Analysis D	ate: 11	1/15/2020	S	SeqNo: 2	582674	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Ethylbenzene	ND	1.0									
Xylenes, Total	ND	1.5									
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130				
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130				
Surr: Dibromofluoromethane	9.9		10.00		99.2	70	130				
Surr: Toluene-d8	9.7		10.00		97.1	70	130				

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 10 of 10



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name:	Timberwolf Environmental	Work Order Numl	per: 2011	429		RcptNo: 1
Received By:	Cheyenne Cason	11/6/2020 7:58:00	AM			
Completed By:	Emily Mocho	11/6/2020 12:02:22	PM			
Reviewed By:	Em 116/20					
Chain of Cus	stody					
1. Is Chain of C	ustody complete?		Yes	V	No 🗌	Not Present
2. How was the	sample delivered?		Cour	ier		
Log In						
	npt made to cool the samples?		Yes	V	No 🗌	NA 🗆
4. Were all sam	ples received at a temperature	of >0° C to 6.0°C	Yes	V	No 🗆	NA 🗆
5. Sample(s) in	proper container(s)?		Yes	V	No 🗌	
6, Sufficient sam	nple volume for indicated test(s)?	Yes	~	No 🗌	
7. Are samples ((except VOA and ONG) proper	y preserved?	Yes	V	No 🗌	Dr.
8. Was preserva	tive added to bottles?		Yes		No 🗹	NA 🗌
9. Received at le	east 1 vial with headspace <1/4	" for AQ VOA?	Yes	V	No 🗌	NA 🗆
0. Were any sar	mple containers received broke	n?	Yes		No 🗹	# of preserved
	ork match bottle labels? ancies on chain of custody)		Yes	V	No 🗆	bottles checked for pH: (<2 or >12 unless noted)
	correctly identified on Chain of	Custody?	Yes	V	No 🗌	Adjusted?
3. Is it clear wha	t analyses were requested?		Yes	V	No 🗌	10000
	ng times able to be met? ustomer for authorization.)		Yes	V	No 🗌	enecked by: JR 11/6/20
	ling (if applicable)				1	
	otified of all discrepancies with	this order?	Yes		No 🗌	NA 🔽
Person	Notified:	Date:		_	-	
By Who	om:	Via:	eMa	il 🗀	Phone Fax	☐ In Person
Regard	ling:					
Client I	nstructions:					
16. Additional re	marks:					
17. <u>Cooler Info</u> Cooler No	The same of the sa	eal Intact Seal No	Seal Da	ate	Signed By	

Citalii-Oi-Custouy Record						TAL			ENVIRONMENTAL	IN-LN
Collection (F En Bramakl		□ Rush				NA	XS	S	ANALYSTS LABORATOR	TORY
•	Project Name:		per Jim Foster			, www	www.hallenvironmental.com	nment	al com	
Mailing Address:	Kaufm	an	Em 11/0120	490	1 Hawk	4901 Hawkins NE	- Albuc	neran	Albuquerque, NM 87109	
	Project #:	C		Te	. 505-3	Tel. 505-345-3975		× 505-	Fax 505-345-4107	
Phone #: 975-304-2139	0/	000					Analysis Request	s Req	nest	
email or Fax#:	Project Manager	ger:					ÞΟ		(10	
QA/QC Package: ☑ Standard □ Level 4 (Full Validation)	Jim F	Foster	em intetro	'S (802°	bcB,a	SWISC	PO4, S		ıəsdA\fı	
Accreditation: Az Compliance	Sampler:					3270	, ₂ O		Jəse	
□ NELAC □ Other	On Ice:	₩ Yes	□ No					(A	∋1¶,	
□ EDD (Type)	# of Coolers:	-			_		103) w.	
	Cooler Temp(including cF); 나	(including CF): 4. 0	からこから ナロニカ				1, 1		ıojilo	
Date Time Matrix Sample Name	Container Type and #	Preservative Type	HEAL No.		99 1808 M) 803	AHs by	31, F, B	V) 092	oO lsto	
35 OH18	200	146			-				L	
1 1048 GW MWZ			500	>						
6,2 MW			500	>						
MWY			F2()	>		E				
1336 GW MWS			510	>						
1248 5W MW6			200	>						
V 6W Du			200	'						
W Trip Blank		>	800	>						
Date: Time: Relinquished by: S120 173 Date: Time: Relinquished by:	Received by: Received by:	7	2026	Remarks:	diel Fig	Blew	- 4 (W)	T vict	OF Blank not preferred	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
(60) 104-1 21 WWW 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5	N 2 N	16/20 07/3/				7	-	10/01	



ANALYTICAL REPORT

180061

November 16, 2020

Timberwolf Environmental, LLC

Sample Delivery Group: L1282855 Samples Received: 11/06/2020

Project Number:

Description: Kaufman No. 1

Report To: Jim Foster

1920 W Villa Maria, Ste 205

Bryan, TX 77807

¹Cp

²Tc















Entire Report Reviewed By:

Olivia Studebaker
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded studes. This test set goots shall not be reproduced, except in full, without writers approved of the liabsconing. Where applicable, sampling conducted by Price Architical National is performed per guidance provided in liabscratory standard operating procedures BIV-SOP-MTLL-0068 (Whee sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
MW1 L1282855-01	5
MW2 L1282855-02	6
MW3 L1282855-03	7
MW4 L1282855-04	8
MW5 L1282855-05	9
MW6 L1282855-06	10
Qc: Quality Control Summary	11
TPH by TCEQ Method 1005	11
GI: Glossary of Terms	12
Al: Accreditations & Locations	13
Sc: Sample Chain of Custody	14



















SAMPLE SUMMARY



			Collected by	Collected date/time	Received date	e/time
MW1 L1282855-01 GW			J. Foster	11/05/20 14:40	11/06/20 09:0	00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1575440	1.01	11/12/20 12:30	11/14/20 14:54	CAG	Mt. Juliet, TN
			Collected by	Collected date/time	Received date	e/time
MW2 L1282855-02 GW			J. Foster	11/05/20 10:48	11/06/20 09:0	00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1575440	1	11/12/20 12:30	11/14/20 15:09	CAG	Mt. Juliet, TN
MW2 142020EE 02 CW			Collected by J. Foster	Collected date/time 11/05/20 11:40	Received data	
MW3 L1282855-03 GW Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
method	Baten	Dilution	date/time	date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1575440	1.01	11/12/20 12:30	11/14/20 15:24	CAG	Mt. Juliet, TN
			Collected by	Collected date/time	Received date	e/time
MW4 L1282855-04 GW			J. Foster	11/05/20 12:15	11/06/20 09:0	00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1575440	1	11/12/20 12:30	11/14/20 15:39	CAG	Mt. Juliet, TN
MW5 L1282855-05 GW			Collected by J. Foster	Collected date/time 11/05/20 13:36	Received dat 11/06/20 09:0	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1575440	1.01	11/12/20 12:30	11/14/20 15:54	CAG	Mt. Juliet, TN
MW6 L1282855-06 GW			Collected by J. Foster	Collected date/time 11/05/20 12:48	Received data 11/06/20 09:0	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location

WG1575440



















TPH by TCEQ Method 1005

11/12/20 12:30

11/14/20 16:09

CAG

Mt. Juliet, TN

Olivia Studebaker Project Manager

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

¹Cp

















Timberwolf Environmental, LLC

ONE LAB. NAPagev159 of 252

Collected date/time: 11/05/20 14:40

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.606	0.900	0.909	1.01	11/14/2020 14:54	WG1575440
TPH C12 - C28	U		0.606	0.900	0.909	1.01	11/14/2020 14:54	WG1575440
TPH C28 - C35	U		0.606	0.900	0.909	1.01	11/14/2020 14:54	WG1575440
TPH C6 - C35	U		0.606	0.900	0.909	1.01	11/14/2020 14:54	WG1575440
(S) o-Terphenyl	98.6				70.0-130		11/14/2020 14:54	WG1575440



















ONE LAB. NAPagev160 of 252

Collected date/time: 11/05/20 10:48

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	11/14/2020 15:09	WG1575440
TPH C12 - C28	U		0.600	0.900	0.900	1	11/14/2020 15:09	WG1575440
TPH C28 - C35	U		0.600	0.900	0.900	1	11/14/2020 15:09	WG1575440
TPH C6 - C35	U		0.600	0.900	0.900	1	11/14/2020 15:09	WG1575440
(S) o-Terphenyl	98.1				70.0-130		11/14/2020 15:09	WG1575440



















ONE LAB. NAPage 161 of 252

Collected date/time: 11/05/20 11:40

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.606	0.900	0.909	1.01	11/14/2020 15:24	WG1575440
TPH C12 - C28	U		0.606	0.900	0.909	1.01	11/14/2020 15:24	WG1575440
TPH C28 - C35	U		0.606	0.900	0.909	1.01	11/14/2020 15:24	WG1575440
TPH C6 - C35	U		0.606	0.900	0.909	1.01	11/14/2020 15:24	WG1575440
(S) o-Terphenyl	98.0				70.0-130		11/14/2020 15:24	WG1575440



















ONE LAB. NAPagev162 of 252

Collected date/time: 11/05/20 12:15

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	11/14/2020 15:39	WG1575440
TPH C12 - C28	U		0.600	0.900	0.900	1	11/14/2020 15:39	WG1575440
TPH C28 - C35	U		0.600	0.900	0.900	1	11/14/2020 15:39	WG1575440
TPH C6 - C35	U		0.600	0.900	0.900	1	11/14/2020 15:39	WG1575440
(S) o-Terphenyl	98.7				70.0-130		11/14/2020 15:39	WG1575440



















ONE LAB. NAPagev163 of 252

Collected date/time: 11/05/20 13:36

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.606	0.900	0.909	1.01	11/14/2020 15:54	WG1575440
TPH C12 - C28	U		0.606	0.900	0.909	1.01	11/14/2020 15:54	WG1575440
TPH C28 - C35	U		0.606	0.900	0.909	1.01	11/14/2020 15:54	WG1575440
TPH C6 - C35	U		0.606	0.900	0.909	1.01	11/14/2020 15:54	WG1575440
(S) o-Terphenyl	97.6				70.0-130		11/14/2020 15:54	WG1575440



















ONE LAB. NAPagev164 of 252

Collected date/time: 11/05/20 12:48

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.606	0.900	0.909	1.01	11/14/2020 16:09	WG1575440
TPH C12 - C28	U		0.606	0.900	0.909	1.01	11/14/2020 16:09	WG1575440
TPH C28 - C35	U		0.606	0.900	0.909	1.01	11/14/2020 16:09	WG1575440
TPH C6 - C35	U		0.606	0.900	0.909	1.01	11/14/2020 16:09	WG1575440
(S) o-Terphenyl	98.9				70.0-130		11/14/2020 16:09	WG1575440



















QUALITY CONTROL SUMMARY

ONE LAB. NAPagev165 of 252

TPH by TCEQ Method 1005

L1282855-01,02,03,04,05,06

Method Blank (MB)

(MB) R3592816-1 11/13	3/20 00:27			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
TPH C6 - C12	U		0.600	0.900
TPH C12 - C28	U		0.600	0.900
TPH C28 - C35	U		0.600	0.900
TPH C6 - C35	U		0.600	0.900
(S) o-Terphenyl	95.2			70.0-130











(LCS) R3592816-2 11/13	3/20 00:42 • (LCSE	D) R3592816-3	3 11/13/20 00:58	3							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%	
TPH C6 - C12	41.7	40.9	38.3	98.1	91.8	75.0-125			6.57	20	
TPH C12 - C28	41.7	41.6	38.6	99.8	92.6	75.0-125			7.48	20	
TPH C6 - C35	83.4	82.5	76.9	98.9	92.2	75.0-125			7.03	20	
(S) o-Terphenyl				101	95.2	70.0-130					







Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

Abbreviations and	a Bermillons
MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.





















Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660
Alaska	17-026
Arizona	AZ0612
Arkansas	88-0469
California	2932
Colorado	TN00003
Connecticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia ¹	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
lowa	364
Kansas	E-10277
Kentucky ^{1 6}	90010
Kentucky ²	16
Louisiana	Al30792
Louisiana ¹	LA180010
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086

Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey-NELAP	TN002
New Mexico ¹	n/a
New York	11742
North Carolina	Env375
North Carolina ¹	DW21704
North Carolina ³	41
North Dakota	R-140
Ohio-VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	LAO00356
South Carolina	84004
South Dakota	n/a
Tennessee 1 4	2006
Texas	T104704245-18-15
Texas ⁵	LAB0152
Utah	TN00003
Vermont	VT2006
Virginia	460132
Washington	C847
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 ⁵	1461.02
Canada	1461.01
EPA-Crypto	TN00003

AIHA-LAP,LLC EMLAP	100789
DOD	1461.01
USDA	P330-15-00234

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.

















	Billing Information:						Analysis / Container / Preservative						Chain of Custody	Page of
Timbersolf	Env					Pres Chk							Pace A National Ces	Analytical*
Timberus IF Bayan A- Report to:	77807		Email To:										12065 Lebanon Rd Mount Juliet, TN 371	
Project Description:				City/State Collected: Lab Project #	~ Jugar	6,							Phone: 615-758-585 Phone: 800-767-585 Fax: 615-758-5859	
Phone: Fax:	Client Project			Lab Project #	/	-							1081	82855
Collected by (print):	Site/Facility ID	1061		P.O. #			5						Acctnum:	E STATE OF
Collected by (signature):		ab MUST Be I		Quote #			100						Template: Prelogin:	
Immediately Packed on Ice N Y		y 5 Day y 10 Day ay		Date Resul	ts Needed	No. of	14						TSR:	
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs							Shipped Via:	Sample # (lab only)
MWI	9	GW		11/5/20	1440	2	1							-51
MWZ	1	1		1	1048	1	1							02
MW3				2.5	1140		1							03
MWY					1215		V					21		04
MWS			- 4		1336		V	100						05
MW6					1248	7	1							06
MWZ	V	-		-	1440		V	-1						
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater	Remarks:								pH Flow		emp	COC Sea COC Sig Bottles	Sample Receipt Ch 11 Present/Intact 12 pned/Accurate: 13 arrive intact: 15 bottles used:	ecklist
DW - Drinking Water OT - Other	Samples returUPSFe	ned via: dExCour	rier	Tra	cking#	ar	2	0418	07			Suffici VOA Zer	ent volume sent: If Applicable O Headspace:	Y_N
Relinquished by : (Signature)		Date: /	20	Time: Rec	eived by: (Signa	ture)			Trip Blan	k Received:	Yes /No HCL / MeoH TBR	Preserv	vation Correct/Che	ecked: M N
Relinquished by : (Signature)		Date:			eived by: (Signa				Femp!	1=1.6	Bottles Received:		vation required by Log	gin: Date/Time
Released to Imaging: 1/6/20	23 3:54:27 1	Date:		Time: Rec	eived for lab by:	(Signat	ture)		Date:	ho	Time: (1.00)	Hold:		Condition: NCF OK



ANALYTICAL REPORT

January 15, 2021





Ss

Cn

Sr СQс

GI

Al



Timberwolf Environmental, LLC

L1305406 Sample Delivery Group: Samples Received: 01/12/2021

Project Number: 180061

Description: Kaufman No. 1

Report To: Jim Foster

1920 W Villa Maria, Ste 205

Bryan, TX 77807

Entire Report Reviewed By:

Olivia Studebaker

Project Manager Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received. Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858

800-767-5859

www.pacenational.com

Sc: Sample Chain of Custody

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
MW1 L1305406-01	5
MW2 L1305406-02	6
MW3 L1305406-03	7
MW4 L1305406-04	8
MW5 L1305406-05	9
MW6 L1305406-06	10
Qc: Quality Control Summary	11
TPH by TCEQ Method 1005	11
GI: Glossary of Terms	12
Al: Accreditations & Locations	13
Sc: Sample Chain of Custody	14





















			Callagatadla	Callantad data/time	Decesional det	. A:
MW1 L1305406-01 GW			Collected by Jim Foster	Collected date/time 01/11/21 14:20	01/12/21 08:45	
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
Metrod	Butch	Dilation	date/time	date/time	Andryst	Location
TPH by TCEQ Method 1005	WG1605410	1	01/14/21 08:38	01/14/21 14:43	TMM	Mt. Juliet, TN
			Collected by	Collected date/time	Received date	e/time
MW2 L1305406-02 GW			Jim Foster	01/11/21 10:20	01/12/21 08:45	5
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1605410	1.01	01/14/21 08:38	01/14/21 14:56	TMM	Mt. Juliet, TN
MW3 L1305406-03 GW			Collected by Jim Foster	Collected date/time 01/11/21 10:55	Received date 01/12/21 08:45	
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
TPH by TCEQ Method 1005	WG1605410	1.01	01/14/21 08:38	01/14/21 15:10	TMM	Mt. Juliet, TN
MW4 L1305406-04 GW			Collected by Jim Foster	Collected date/time 01/11/21 11:42	Received date 01/12/21 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1605410	1.01	01/14/21 08:38	01/14/21 15:23	TMM	Mt. Juliet, TN
MW5 L1305406-05 GW			Collected by Jim Foster	Collected date/time 01/11/21 12:24	Received date 01/12/21 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1605410	1.01	01/14/21 08:38	01/14/21 15:37	TMM	Mt. Juliet, TN
MW6 L1305406-06 GW			Collected by Jim Foster	Collected date/time 01/11/21 13:25	Received date 01/12/21 08:45	
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			-l - t - /t:	-1 - 4 - /4:		

WG1605410



















TPH by TCEQ Method 1005

date/time

01/14/21 08:38

1.07

date/time

01/14/21 15:51

TMM

Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

¹Cp

















ONE LAB. NAPagev173 of 252

Collected date/time: 01/11/21 14:20

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	01/14/2021 14:43	WG1605410
TPH C12 - C28	U		0.600	0.900	0.900	1	01/14/2021 14:43	WG1605410
TPH C28 - C35	U		0.600	0.900	0.900	1	01/14/2021 14:43	WG1605410
TPH C6 - C35	U		0.600	0.900	0.900	1	01/14/2021 14:43	WG1605410
(S) o-Terphenyl	116				70.0-130		01/14/2021 14:43	WG1605410



















ONE LAB. NAPagev174 of 252

Collected date/time: 01/11/21 10:20

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.606	0.900	0.909	1.01	01/14/2021 14:56	WG1605410
TPH C12 - C28	U		0.606	0.900	0.909	1.01	01/14/2021 14:56	WG1605410
TPH C28 - C35	U		0.606	0.900	0.909	1.01	01/14/2021 14:56	WG1605410
TPH C6 - C35	U		0.606	0.900	0.909	1.01	01/14/2021 14:56	WG1605410
(S) o-Terphenyl	116				70.0-130		01/14/2021 14:56	WG1605410



















ONE LAB. NAPagev175 of 252

Collected date/time: 01/11/21 10:55

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.606	0.900	0.909	1.01	01/14/2021 15:10	WG1605410
TPH C12 - C28	U		0.606	0.900	0.909	1.01	01/14/2021 15:10	WG1605410
TPH C28 - C35	U		0.606	0.900	0.909	1.01	01/14/2021 15:10	WG1605410
TPH C6 - C35	U		0.606	0.900	0.909	1.01	01/14/2021 15:10	WG1605410
(S) o-Terphenyl	118				70.0-130		01/14/2021 15:10	WG1605410



















ONE LAB. NAPagev176 of 252

Collected date/time: 01/11/21 11:42

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.606	0.900	0.909	1.01	01/14/2021 15:23	WG1605410
TPH C12 - C28	U		0.606	0.900	0.909	1.01	01/14/2021 15:23	WG1605410
TPH C28 - C35	U		0.606	0.900	0.909	1.01	01/14/2021 15:23	WG1605410
TPH C6 - C35	U		0.606	0.900	0.909	1.01	01/14/2021 15:23	WG1605410
(S) o-Terphenyl	119				70.0-130		01/14/2021 15:23	WG1605410



















ONE LAB. NAPagev177 of 252

Collected date/time: 01/11/21 12:24

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.606	0.900	0.909	1.01	01/14/2021 15:37	WG1605410
TPH C12 - C28	U		0.606	0.900	0.909	1.01	01/14/2021 15:37	WG1605410
TPH C28 - C35	U		0.606	0.900	0.909	1.01	01/14/2021 15:37	WG1605410
TPH C6 - C35	U		0.606	0.900	0.909	1.01	01/14/2021 15:37	WG1605410
(S) o-Terphenyl	117				70.0-130		01/14/2021 15:37	WG1605410



















ONE LAB. NAPagev178 of 252

Collected date/time: 01/11/21 13:25

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.642	0.900	0.963	1.07	01/14/2021 15:51	WG1605410
TPH C12 - C28	U		0.642	0.900	0.963	1.07	01/14/2021 15:51	WG1605410
TPH C28 - C35	U		0.642	0.900	0.963	1.07	01/14/2021 15:51	WG1605410
TPH C6 - C35	U		0.642	0.900	0.963	1.07	01/14/2021 15:51	WG1605410
(S) o-Terphenyl	123				70.0-130		01/14/2021 15:51	WG1605410



















QUALITY CONTROL SUMMARY

ONE LAB. NAPagev179 of 252

TPH by TCEQ Method 1005

L1305406-01,02,03,04,05,06

Method Blank (MB)

(MB) R3612566-1 01/	14/21 10:45			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
TPH C6 - C12	U		0.600	0.900
TPH C12 - C28	U		0.600	0.900
TPH C28 - C35	U		0.600	0.900
TPH C6 - C35	U		0.600	0.900
(S) o-Terphenyl	119			70.0-130









Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3612566-2 01/14/21 10:59 • (LCSD) R3612566-3 01/14/21 11:13											
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%	
TPH C6 - C12	41.7	44.5	44.7	107	107	75.0-125			0.448	20	
TPH C12 - C28	41.7	40.3	40.1	96.6	96.2	75.0-125			0.498	20	
TPH C6 - C35	83.4	84.8	84.8	102	102	75.0-125			0.000	20	
(S) o-Terphenyl				119	119	70.0-130					









Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

	a Definitions
MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.























Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660
Alaska	17-026
Arizona	AZ0612
Arkansas	88-0469
California	2932
Colorado	TN00003
Connecticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia ¹	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
lowa	364
Kansas	E-10277
Kentucky 16	KY90010
Kentucky ²	16
Louisiana	Al30792
Louisiana ¹	LA180010
Maine	TN00003
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086

Nebraska	NE-OS-15-05
Nevada	TN000032021-1
New Hampshire	2975
New Jersey-NELAP	TN002
New Mexico ¹	TN00003
New York	11742
North Carolina	Env375
North Carolina ¹	DW21704
North Carolina ³	41
North Dakota	R-140
Ohio-VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	LAO00356
South Carolina	84004
South Dakota	n/a
Tennessee 1 4	2006
Texas	T104704245-20-18
Texas ⁵	LAB0152
Utah	TN00003
Vermont	VT2006
Virginia	460132
Washington	C847
West Virginia	233
Wisconsin	998093910
Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	
A2LA - ISO 17025 5	1461.02	
Canada	1461.01	
EPA-Crypto	TN00003	

AIHA-LAP,LLC EMLAP	100789
DOD	1461.01
USDA	P330-15-00234

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



















		. 0	Billing Info	rmation:			- E-1	Analysis / Co	ntainer / Preser	rvative		Chain of Custody	Page of
Timberwolf Env Byealo	110nman	hl				Pres Chk						Pace P	Analytical * Interfer Testing & Innovestion
Report to:	10-6	770.0	Email To:	Otes	1 timber	IF.	in the second					12065 Lebanon Rd Mount Juliet, TN 371	
Project Description:			1	City/State Collected:	19 Imbew		1					Phone: 615-758-585 Phone: 800-767-585 Fax: 615-758-5859	· 634
Phone:	Client Project	#		Lab Project #			132						5406
Fax:	180	100					6		4	144		Table E	084
Collected by (print):	Site/Facility ID		J , p(1)	P.O. #								Acctnum:	1 10
Collected by (signature):		Lab MUST Be		Quote #			600					Template: Prelogin:	
Immediately Packed on Ice N Y	Next Da		(Rad Only) y (Rad Only)	Date R	esults Needed	No. of	2					TSR: PB:	
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	E					Shipped Via:	Sample # (lab only)
MWL	G	GW		1/11/2	1420				L'as en				-01
MWZ	G	50		1.1	1020								-07
MIN3	9	GW			1055								~7
MW4	9	GW			1142								-04
MWS	9	GW			1224							100	-05
MW4 MW4 MW5 MW6	6	GW	The state of the s	V	1325				27				-16
													/
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater	Remarks:							pH	Temp _		COC Seal COC Signa Bottles	ample Receipt Ch Present/Intact ed/Accurate: arrive intact:	necklist
DW - Drinking Water OT - Other	Samples retu	rned via: edEx Cou	rier		Tracking #	422	0212	639			Sufficie	bottles used: nt volume sent:	ole y N
Relinquished by : (Signature)		Date:	21	Time: 1/030	Received by: (Sign		08.	Trip Blank		/No CL/MeoH		tion Correct/Ch	ecked: Y_N
Relinquished by : (Signature)		Date:		Time:	Received by: (Sign	ature)		Temb: 41		Received:	If preserva	tion required by Lo	gin: Date/Time
Relinquished by : (Signature) Released to Imaging: 1/6/20	023 3:54:27	Date:		Time:	Recaived for lab by	y: (Signatur	"Vull	Pate: 2	a) Time:	Sicis	Hold:		Condition: NCF / OK

L1305406 TIMENVBTX NCF

R₅

2	
0	
Ű	
•	
_	
S	
0	
23	
0	
Ġ	
Ġ	
Ġ	
Ġ	
Ġ	
Ġ	
52.1	
52.1	
Ġ	
52.1	
52.1	
:52:13	
:52:13	
:52:13 A	
:52:13 A	
:52:13 A)	
:52:13 A)	
:52:13 A)	
:52:13 A	
:52:13 A)	

ime estimate: oh Tim	G	Grouping date: 12 January				
Tembers				***************************************		
Cole Medley (responsible)	Olivia Studebaker					
Login Clarification needed						
Chain of custody is incomplete						
Please specify Metals requested						
Please specify TCLP requested						
Received additional samples not list	ted on COC					
Sample IDs on containers do not ma						
Client did not "X" analysis						
Chain of Custody is missing						
If no COC: Received by:						
If no COC: Date/Time:						
If no COC: Temp./Cont.Rec./pH:						
If no COC: Carrier:						
If no COC: Tracking #:						
Client informed by call	1934					
Client informed by Email						
Client informed by Voicemail						
Date/Time:1/12/21	11.7					
PM initials:OS						
Client Contact:						
omments		77.				
Cole Medley	***************************************		12 January	2021 3:45 PM		
Client didn't "X" analysis						
Logged per analysis listed on COC						
Olivia Studebaker			12 January	2021 3:52 PM		
Please keep logged for TPHTX per th	e COC.					
Cole Medley			12 January	2021 4:01 PM		
Done.						



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

January 14, 2021

Jim Foster Timberwolf Environmental 1920 W Villa Maria Ste 205 Bryan, TX 77807

TEL: (979) 324-2139

FAX:

RE: Kaufman 1 OrderNo.: 2101390

Dear Jim Foster:

Hall Environmental Analysis Laboratory received 8 sample(s) on 1/12/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order: 2101390

Date Reported: 1/14/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 2101390

Project: Kaufman 1

Lab ID: 2101390-001 **Collection Date:** 1/11/2021 2:20:00 PM

Client Sample ID: MW1 Matrix: AQUEOUS

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: JMR ND 1.0 1/13/2021 5:43:31 AM B74592 Benzene μg/L 1 Toluene ND 1.0 μg/L 1/13/2021 5:43:31 AM B74592 ND Ethylbenzene 1.0 μg/L 1 1/13/2021 5:43:31 AM B74592 Xylenes, Total ND 1/13/2021 5:43:31 AM B74592 1.5 μg/L 1 70-130 Surr: 1,2-Dichloroethane-d4 105 %Rec 1 1/13/2021 5:43:31 AM B74592 Surr: 4-Bromofluorobenzene 98.5 70-130 %Rec 1/13/2021 5:43:31 AM B74592 Surr: Dibromofluoromethane 104 70-130 %Rec 1/13/2021 5:43:31 AM B74592 Surr: Toluene-d8 100 70-130 %Rec 1/13/2021 5:43:31 AM B74592

Lab ID: 2101390-002 **Collection Date:** 1/11/2021 10:20:00 AM

Client Sample ID: MW2 Matrix: AQUEOUS

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: JMR Benzene ND 1.0 µg/L 1/13/2021 6:11:59 AM B74592 Toluene ND 1/13/2021 6:11:59 AM B74592 1.0 μg/L 1 Ethylbenzene ND 1.0 μg/L 1 1/13/2021 6:11:59 AM B74592 Xylenes, Total ND 1.5 μg/L 1 1/13/2021 6:11:59 AM B74592 Surr: 1,2-Dichloroethane-d4 105 70-130 %Rec 1 1/13/2021 6:11:59 AM B74592 Surr: 4-Bromofluorobenzene 99.7 70-130 %Rec 1 1/13/2021 6:11:59 AM B74592 Surr: Dibromofluoromethane 103 70-130 1/13/2021 6:11:59 AM B74592 %Rec 1 Surr: Toluene-d8 99.3 70-130 %Rec 1/13/2021 6:11:59 AM B74592

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 5

Lab Order: 2101390

Date Reported: 1/14/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 2101390

Project: Kaufman 1

Lab ID: 2101390-003 **Collection Date:** 1/11/2021 10:55:00 AM

Client Sample ID: MW3 Matrix: AQUEOUS

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: JMR ND 1.0 1/13/2021 6:40:37 AM B74592 Benzene μg/L 1 Toluene ND 1.0 μg/L 1/13/2021 6:40:37 AM B74592 ND Ethylbenzene 1.0 μg/L 1 1/13/2021 6:40:37 AM B74592 Xylenes, Total ND 1/13/2021 6:40:37 AM B74592 1.5 μg/L 1 70-130 Surr: 1,2-Dichloroethane-d4 107 %Rec 1 1/13/2021 6:40:37 AM B74592 Surr: 4-Bromofluorobenzene 70-130 %Rec B74592 103 1/13/2021 6:40:37 AM Surr: Dibromofluoromethane 106 70-130 %Rec 1/13/2021 6:40:37 AM B74592 Surr: Toluene-d8 98.8 70-130 %Rec 1/13/2021 6:40:37 AM B74592

Lab ID: 2101390-004 **Collection Date:** 1/11/2021 11:42:00 AM

Client Sample ID: MW4 Matrix: AQUEOUS

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: JMR Benzene ND 1.0 µg/L 1/13/2021 7:09:15 AM B74592 Toluene ND 1/13/2021 7:09:15 AM B74592 1.0 μg/L 1 Ethylbenzene ND 1.0 μg/L 1 1/13/2021 7:09:15 AM B74592 Xylenes, Total ND 1.5 μg/L 1 1/13/2021 7:09:15 AM B74592 Surr: 1,2-Dichloroethane-d4 103 70-130 %Rec 1 1/13/2021 7:09:15 AM B74592 Surr: 4-Bromofluorobenzene 102 70-130 %Rec 1 1/13/2021 7:09:15 AM B74592 Surr: Dibromofluoromethane 102 70-130 1/13/2021 7:09:15 AM B74592 %Rec 1 Surr: Toluene-d8 97.3 70-130 %Rec 1/13/2021 7:09:15 AM B74592

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 5

Lab Order: 2101390

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/14/2021

2101390

Lab Order:

CLIENT: Timberwolf Environmental

Project: Kaufman 1

Lab ID: 2101390-005 **Collection Date:** 1/11/2021 12:24:00 PM

Matrix: AQUEOUS Client Sample ID:

RL Qual Units DF Date Analyzed **Analyses** Result **Batch ID EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: JMR Benzene ND 1.0 1/13/2021 7:37:46 AM B74592 μg/L 1 Toluene ND 1.0 μg/L 1/13/2021 7:37:46 AM B74592 ND Ethylbenzene 1.0 μg/L 1 1/13/2021 7:37:46 AM B74592 Xylenes, Total ND 1.5 μg/L 1/13/2021 7:37:46 AM B74592 1 70-130 Surr: 1,2-Dichloroethane-d4 104 %Rec 1 1/13/2021 7:37:46 AM B74592 Surr: 4-Bromofluorobenzene 101 70-130 %Rec 1/13/2021 7:37:46 AM B74592 Surr: Dibromofluoromethane 104 70-130 %Rec 1/13/2021 7:37:46 AM B74592 Surr: Toluene-d8 98.2 70-130 1/13/2021 7:37:46 AM %Rec B74592

Lab ID: 2101390-006 **Collection Date:** 1/11/2021 1:25:00 PM

Client Sample ID: MW6 Matrix: AQUEOUS

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST					Ana	lyst: JMR
Benzene	ND	1.0	μg/L	1	1/13/2021 8:06:16 A	AM B74592
Toluene	ND	1.0	μg/L	1	1/13/2021 8:06:16 A	AM B74592
Ethylbenzene	ND	1.0	μg/L	1	1/13/2021 8:06:16 A	AM B74592
Xylenes, Total	ND	1.5	μg/L	1	1/13/2021 8:06:16 A	AM B74592
Surr: 1,2-Dichloroethane-d4	110	70-130	%Rec	1	1/13/2021 8:06:16 A	AM B74592
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	1/13/2021 8:06:16 A	AM B74592
Surr: Dibromofluoromethane	106	70-130	%Rec	1	1/13/2021 8:06:16 A	AM B74592
Surr: Toluene-d8	101	70-130	%Rec	1	1/13/2021 8:06:16 A	AM B74592

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

Page 3 of 5

Lab Order: 2101390

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/14/2021

CLIENT: Timberwolf Environmental Lab Order: 2101390

Project: Kaufman 1

Lab ID: 2101390-007 **Collection Date:** 1/11/2021 12:28:00 PM

Client Sample ID: Dup Matrix: AQUEOUS

RL Qual Units DF Date Analyzed **Analyses** Result **Batch ID EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: JMR Benzene ND 1.0 1/13/2021 8:34:47 AM B74592 μg/L 1 Toluene ND 1.0 μg/L 1/13/2021 8:34:47 AM B74592 ND Ethylbenzene 1.0 μg/L 1/13/2021 8:34:47 AM B74592 Xylenes, Total ND 1.5 μg/L 1/13/2021 8:34:47 AM B74592 1 70-130 B74592 Surr: 1,2-Dichloroethane-d4 106 %Rec 1 1/13/2021 8:34:47 AM Surr: 4-Bromofluorobenzene 101 70-130 %Rec 1/13/2021 8:34:47 AM B74592 Surr: Dibromofluoromethane 107 70-130 %Rec 1/13/2021 8:34:47 AM B74592 Surr: Toluene-d8 70-130 %Rec 1/13/2021 8:34:47 AM 96.9 B74592

Lab ID: 2101390-008 Collection Date:

Client Sample ID: Trip Blank Matrix: TRIP BLANK

Analyses	Result	RL Qua	al Units	DF	Date Analyzed	Ba	tch ID
EPA METHOD 8260: VOLATILES SHORT LIST					Ana	alyst:	JMR
Benzene	ND	1.0	μg/L	1	1/13/2021 9:03:19	AM	B74592
Toluene	ND	1.0	μg/L	1	1/13/2021 9:03:19	AM	B74592
Ethylbenzene	ND	1.0	μg/L	1	1/13/2021 9:03:19	AM	B74592
Xylenes, Total	ND	1.5	μg/L	1	1/13/2021 9:03:19	AM	B74592
Surr: 1,2-Dichloroethane-d4	101	70-130	%Rec	1	1/13/2021 9:03:19	AM	B74592
Surr: 4-Bromofluorobenzene	105	70-130	%Rec	1	1/13/2021 9:03:19	AM	B74592
Surr: Dibromofluoromethane	107	70-130	%Rec	1	1/13/2021 9:03:19	AM	B74592
Surr: Toluene-d8	99.7	70-130	%Rec	1	1/13/2021 9:03:19	AM	B74592

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 5

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2101390** *14-Jan-21*

Client: Timberwolf Environmental

Project: Kaufman 1

Sample ID: 100ng Ics	SampT	ype: LC	S	Tes	tCode: El	PA Method	8260: Volatile	s Short L	ist	
Client ID: LCSW	Batch	ID: B7	4592	F	RunNo: 74592					
Prep Date:	Analysis D	ate: 1/	12/2021	S	SeqNo: 20	633057	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.0	70	130			
Surr: Toluene-d8	9.7		10.00		96.7	70	130			

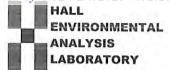
Sample ID: VSB Fridge	SampT	pType: MBLK TestCode: EPA Method 8260: Volatiles Short List				TestCode: EPA Method 8260: Volatiles Short List					
Client ID: PBW	Batch	n ID: B7	4592	RunNo: 74592							
Prep Date:	Analysis D	ate: 1/	12/2021	9	SeqNo: 2	633058	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	1.0									
Toluene	ND	1.0									
Ethylbenzene	ND	1.0									
Xylenes, Total	ND	1.5									
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130				
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130				
Surr: Dibromofluoromethane	11		10.00		105	70	130				
Surr: Toluene-d8	9.9		10.00		99.5	70	130				

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 5



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

Website: clients.hallenvironmental.com Client Name: Timberwolf Environmental Work Order Number: 2101390 RcptNo: 1 Received By: Isaiah Ortiz 1/12/2021 7:50:00 AM Completed By: Isaiah Ortiz 1/12/2021 8:39:11 AM Reviewed By: Je 1/12/21 Chain of Custody 1. Is Chain of Custody complete? Yes 🗸 No 🗌 Not Present 2 How was the sample delivered? Courier Log In 3. Was an attempt made to cool the samples? Yes 🗸 No 🗌 NA 🗌 4. Were all samples received at a temperature of >0° C to 6.0°C No 🗌 Yes V NA 🗌 Sample(s) in proper container(s)? Yes 🗸 No 🗌 Yes V 6. Sufficient sample volume for indicated test(s)? No 🗌 7. Are samples (except VOA and ONG) properly preserved? Yes V No 🗍 8. Was preservative added to bottles? Yes 🗌 No V NA 🗌 9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes V No NA 🔲 10. Were any sample containers received broken? Yes -No V # of preserved bottles checked 11. Does paperwork match bottle labels? No 🗌 for pH: (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? 12 Are matrices correctly identified on Chain of Custody? No 🗌 Yes 🗸 13. Is it clear what analyses were requested? No Checked by: SGL 1/12/21 14. Were all holding times able to be met? Yes V No (If no, notify customer for authorization.) Special Handling (if applicable) 15. Was client notified of all discrepancies with this order? Yes NA V No 🗍 Person Notified: Date: By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	8.0	Good	Yes			

Turn-Around Time: Chain-of-Custody Record HALL ENVIRONMENTAL Client: imberure F Eniverna □ Rush ANALYSIS LABORATORY Project Name: www.hallenvironmental.com Mailing Address: 4901 Hawkins NE - Albuquerque, NM 87109 Project #: Tel. 505-345-3975 Fax 505-345-4107 180061 979-324-2139 Phone #: Analysis Request i'ma team timber wolf Project Manager: email or Fax#: SO4 TPH:8015D(GRO / DRO / MRO) Coliform (Present/Absent) BTEX / MTBE / TMB's (8021) Dim Foster QA/QC Package: 8270SIMS ☐ Standard ☐ Level 4 (Full Validation) NO₂, 8081 Pesticides/8082 ☐ Az Compliance Accreditation: Sampler: 8270 (Semi-VOA) □ NELAC □ Other On Ice: Yes □ No CI, F, Br, NO3, RCRA 8 Metals PAHs by 8310 ☐ EDD (Type) # of Coolers: () 8260 (VOA) Cooler Temp(including CF): 08 ± 0.4 (°C) Total HEAL No. Container Preservative 7,101390 Sample Name Date Time Matrix Type and # Type Hot 001 002 1020 003 004 005 1325 006 007 1228 008

Relinquished by:

Relinguished by:

Date:

Time:

Remarks: *Trip blank provided by Client not filled at Hall *-ENM 1/12/21

Received by:

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107

Website: clients.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109



June 14, 2021

Jim Foster

Timberwolf Environmental 1920 W Villa Maria Ste 205

Bryan, TX 77807

TEL: (979) 324-2139

FAX

RE: Kaufman OrderNo.: 2105B57

Dear Jim Foster:

Hall Environmental Analysis Laboratory received 8 sample(s) on 5/27/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order: **2105B57**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/14/2021

CLIENT: Timberwolf Environmental Lab Order: 2105B57

Project: Kaufman

Lab ID: 2105B57-001 **Collection Date:** 5/26/2021 4:25:00 PM

Client Sample ID: MW 1 Matrix: GROUNDWATER

RL Qual Units DF Date Analyzed **Analyses** Result **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: CCM Methyl tert-butyl ether (MTBE) ND 2.5 μg/L 6/2/2021 1:24:00 PM R78810 1 Benzene ND 1.0 μg/L 6/2/2021 1:24:00 PM R78810 Toluene ND 1.0 μg/L 1 6/2/2021 1:24:00 PM R78810 Ethylbenzene ND 1.0 μg/L 1 6/2/2021 1:24:00 PM R78810 Xylenes, Total ND 2.0 6/2/2021 1:24:00 PM μg/L 1 R78810 1,2,4-Trimethylbenzene ND 6/2/2021 1:24:00 PM R78810 1.0 μg/L 1,3,5-Trimethylbenzene ND 1.0 μg/L 6/2/2021 1:24:00 PM R78810 Surr: 4-Bromofluorobenzene 70-130 %Rec 6/2/2021 1:24:00 PM R78810 86.0

Lab ID: 2105B57-002 **Collection Date:** 5/26/2021 12:53:00 PM

Client Sample ID: MW 2 Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES					Ana	lyst: CCM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	6/2/2021 2:24:00 PI	M R78810
Benzene	ND	1.0	μg/L	1	6/2/2021 2:24:00 PI	M R78810
Toluene	ND	1.0	μg/L	1	6/2/2021 2:24:00 PI	M R78810
Ethylbenzene	ND	1.0	μg/L	1	6/2/2021 2:24:00 PI	M R78810
Xylenes, Total	ND	2.0	μg/L	1	6/2/2021 2:24:00 PI	M R78810
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	6/2/2021 2:24:00 PI	M R78810
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	6/2/2021 2:24:00 PI	M R78810
Surr: 4-Bromofluorobenzene	88.5	70-130	%Rec	1	6/2/2021 2:24:00 PI	M R78810

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 6

Lab Order: **2105B57**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/14/2021

CLIENT: Timberwolf Environmental Lab Order: 2105B57

Project: Kaufman

Lab ID: 2105B57-003 **Collection Date:** 5/26/2021 1:45:00 PM

Client Sample ID: MW 3 Matrix: GROUNDWATER

RL Qual Units DF Date Analyzed **Analyses** Result **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: CCM Methyl tert-butyl ether (MTBE) ND 2.5 μg/L 6/2/2021 2:43:00 PM R78810 1 Benzene ND 1.0 μg/L 6/2/2021 2:43:00 PM R78810 Toluene ND 1.0 μg/L 1 6/2/2021 2:43:00 PM R78810 Ethylbenzene ND 1.0 μg/L 1 6/2/2021 2:43:00 PM R78810 Xylenes, Total ND 2.0 6/2/2021 2:43:00 PM μg/L 1 R78810 1,2,4-Trimethylbenzene ND 6/2/2021 2:43:00 PM R78810 1.0 μg/L 1,3,5-Trimethylbenzene ND 1.0 μg/L 6/2/2021 2:43:00 PM R78810 Surr: 4-Bromofluorobenzene 70-130 %Rec 6/2/2021 2:43:00 PM R78810 83.8

Lab ID: 2105B57-004 **Collection Date:** 5/26/2021 2:20:00 PM

Client Sample ID: MW 4 Matrix: GROUNDWATER

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES					Ana	lyst: CCM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	6/2/2021 3:03:00 PM	M R78810
Benzene	ND	1.0	μg/L	1	6/2/2021 3:03:00 PM	M R78810
Toluene	ND	1.0	μg/L	1	6/2/2021 3:03:00 PM	M R78810
Ethylbenzene	ND	1.0	μg/L	1	6/2/2021 3:03:00 PM	M R78810
Xylenes, Total	ND	2.0	μg/L	1	6/2/2021 3:03:00 PM	M R78810
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	6/2/2021 3:03:00 PM	M R78810
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	6/2/2021 3:03:00 PM	M R78810
Surr: 4-Bromofluorobenzene	83.4	70-130	%Rec	1	6/2/2021 3:03:00 PM	M R78810

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 6

Lab Order: 2105B57

Date Reported: 6/14/2021

2105B57

Hall Environmental Analysis Laboratory, Inc.

Lab Order:

CLIENT: Timberwolf Environmental

Project: Kaufman

Lab ID: 2105B57-005 **Collection Date:** 5/26/2021 3:00:00 PM

Client Sample ID: MW 5 Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES					Ana	lyst: CCM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	6/2/2021 3:23:00 PM	M R78810
Benzene	ND	1.0	μg/L	1	6/2/2021 3:23:00 PM	M R78810
Toluene	ND	1.0	μg/L	1	6/2/2021 3:23:00 PM	M R78810
Ethylbenzene	ND	1.0	μg/L	1	6/2/2021 3:23:00 PM	M R78810
Xylenes, Total	ND	2.0	μg/L	1	6/2/2021 3:23:00 PM	M R78810
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	6/2/2021 3:23:00 PM	M R78810
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	6/2/2021 3:23:00 PM	M R78810
Surr: 4-Bromofluorobenzene	84.5	70-130	%Rec	1	6/2/2021 3:23:00 PM	M R78810

Lab ID: 2105B57-006 **Collection Date:** 5/26/2021 3:44:00 PM

Client Sample ID: MW 6 Matrix: GROUNDWATER

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES					Ana	lyst: CCM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	6/2/2021 3:43:00 PI	M R78810
Benzene	ND	1.0	μg/L	1	6/2/2021 3:43:00 Pf	M R78810
Toluene	ND	1.0	μg/L	1	6/2/2021 3:43:00 Pf	M R78810
Ethylbenzene	ND	1.0	μg/L	1	6/2/2021 3:43:00 Pf	M R78810
Xylenes, Total	3.8	2.0	μg/L	1	6/2/2021 3:43:00 Pf	M R78810
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	6/2/2021 3:43:00 Pf	M R78810
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	6/2/2021 3:43:00 Pf	M R78810
Surr: 4-Bromofluorobenzene	84.3	70-130	%Rec	1	6/2/2021 3:43:00 Pf	M R78810

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 6

Lab Order: 2105B57

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/14/2021

CLIENT: Timberwolf Environmental Lab Order: 2105B57

Project: Kaufman

Lab ID: 2105B57-007 **Collection Date:** 5/26/2021 3:00:00 PM

Client Sample ID: DUP Matrix: GROUNDWATER

RL Qual Units DF Date Analyzed **Analyses** Result **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: CCM Methyl tert-butyl ether (MTBE) ND 2.5 μg/L 6/2/2021 4:03:00 PM R78810 1 Benzene ND 1.0 μg/L 6/2/2021 4:03:00 PM R78810 Toluene ND 1.0 μg/L 1 6/2/2021 4:03:00 PM R78810 Ethylbenzene ND 1.0 μg/L 1 6/2/2021 4:03:00 PM R78810 Xylenes, Total ND 2.0 6/2/2021 4:03:00 PM μg/L 1 R78810 1,2,4-Trimethylbenzene ND 1.0 6/2/2021 4:03:00 PM R78810 μg/L 1,3,5-Trimethylbenzene ND 1.0 μg/L 6/2/2021 4:03:00 PM R78810 Surr: 4-Bromofluorobenzene 85.1 70-130 %Rec 6/2/2021 4:03:00 PM R78810

Lab ID: 2105B57-008 Collection Date:

Client Sample ID: Trip Blank Matrix: TRIP BLANK

Analyses	es Result RL Qual Units					Batch ID
EPA METHOD 8021B: VOLATILES					Anal	yst: CCM
Methyl tert-butyl ether (MTBE)	ND	2.5	μg/L	1	6/2/2021 4:23:00 PM	M R78810
Benzene	ND	1.0	μg/L	1	6/2/2021 4:23:00 PM	И R78810
Toluene	ND	1.0	μg/L	1	6/2/2021 4:23:00 PM	И R78810
Ethylbenzene	ND	1.0	μg/L	1	6/2/2021 4:23:00 PM	И R78810
Xylenes, Total	ND	2.0	μg/L	1	6/2/2021 4:23:00 PM	И R78810
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	6/2/2021 4:23:00 PM	И R78810
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	6/2/2021 4:23:00 PM	И R78810
Surr: 4-Bromofluorobenzene	83.7	70-130	%Rec	1	6/2/2021 4:23:00 PM	И R78810

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 6

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2105B57**

14-Jun-21

Client: Timberwolf Environmental

Project: Kaufman

Sample ID: 100ng BTEX Ics	SampT	ype: LC	S	TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSW	Batch	ID: R7	8810	F	RunNo: 7 8	8810				
Prep Date:	Analysis D	ate: 6/ 2	2/2021	S	SeqNo: 2	763901	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17	2.5	20.00	0	85.7	59.5	133			
Benzene	18	1.0	20.00	0	89.4	80	120			
Toluene	18	1.0	20.00	0	90.6	80	120			
Ethylbenzene	19	1.0	20.00	0	93.8	80	120			
Xylenes, Total	55	2.0	60.00	0	92.1	80	120			
1,2,4-Trimethylbenzene	19	1.0	20.00	0	94.2	80	120			
1,3,5-Trimethylbenzene	19	1.0	20.00	0	94.5	80	120			
Surr: 4-Bromofluorobenzene	17		20.00		85.0	70	130			

Sample ID: MB	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volati	iles						
Client ID: PBW	Batch	n ID: R7	8810	F	RunNo: 78810									
Prep Date:	Analysis D	ate: 6/	2/2021	5	SeqNo: 2	763902	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Methyl tert-butyl ether (MTBE)	ND	2.5	•		•									
Benzene	ND	1.0												
Toluene	ND	1.0												
Ethylbenzene	ND	1.0												
Xylenes, Total	ND	2.0												
1,2,4-Trimethylbenzene	ND	1.0												
1,3,5-Trimethylbenzene	ND	1.0												
Surr: 4-Bromofluorobenzene	17		20.00		84.1	70	130							

Sample ID: 2105B57-001ams	SampT	уре: М	e: MS TestCode: EPA Method 8021B: Volatiles							
Client ID: MW 1	Batcl	n ID: R7	8810	RunNo: 78810						
Prep Date:	Analysis D	oate: 6/	2/2021	S	SeqNo: 2763904					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	18	2.5	20.00	0	91.5	60.4	152			
Benzene	19	1.0	20.00	0	95.7	80	120			
Toluene	19	1.0	20.00	0	97.2	80	120			
Ethylbenzene	20	1.0	20.00	0	99.1	80	120			
Xylenes, Total	58	2.0	60.00	0	97.0	80	120			
1,2,4-Trimethylbenzene	19	1.0	20.00	0	97.4	80	120			
1,3,5-Trimethylbenzene	20	1.0	20.00	0	98.5	80	120			
Surr: 4-Bromofluorobenzene	17		20.00		84.6	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 6

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2105B57** *14-Jun-21*

Client: Timberwolf Environmental

Project: Kaufman

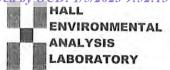
Sample ID: 2105B57-001ams	d SampT	SampType: MSD TestCode: EPA Method 8021B: Volatiles								
Client ID: MW 1	Batch	n ID: R7	8810	RunNo: 78810						
Prep Date:	Analysis D	oate: 6/ 2	2/2021	9	SeqNo: 2	763905	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	18	2.5	20.00	0	89.4	60.4	152	2.29	20	
Benzene	17	1.0	20.00	0	85.9	80	120	10.7	20	
Toluene	17	1.0	20.00	0	87.1	80	120	11.0	20	
Ethylbenzene	18	1.0	20.00	0	90.1	80	120	9.55	20	
Xylenes, Total	53	2.0	60.00	0	88.9	80	120	8.68	20	
1,2,4-Trimethylbenzene	19	1.0	20.00	0	92.8	80	120	4.77	20	
1,3,5-Trimethylbenzene	19	1.0	20.00	0	93.7	80	120	5.02	20	
Surr: 4-Bromofluorobenzene	17		20.00		84.1	70	130	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 6 of 6



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name:	Timberwolf Environmental	Work Order	Number: 210	5B57		RcptNo: 1
Received By:	Juan Rojas	5/27/2021 7:1	0:00 AM		Hansay	
Completed By:	Desiree Dominguez	5/27/2021 9:2	3:13 AM		1	
Reviewed By:	SPA 5.27.				113	
Chain of Cus	<u>stody</u>					
1. Is Chain of C	ustody complete?		Yes	~	No 🗌	Not Present
2. How was the	sample delivered?		Cour	ier		
Log In						
	npt made to cool the samples?		Yes	V	No 🗌	NA 🗆
4. Were all samp	oles received at a temperature	of >0° C to 6.0°	C Yes	V	No 🗆	NA 🗆
5. Sample(s) in p	proper container(s)?		Yes	V	No 🗌	
6. Sufficient sam	ple volume for indicated test(s)?	Yes	V	No 🗌	
7. Are samples (except VOA and ONG) properl	y preserved?	Yes	V	No 🗌	
8. Was preservat	tive added to bottles?		Yes		No 🗸	NA 🗆
9. Received at le	ast 1 vial with headspace <1/4	" for AQ VOA?	Yes	V	No 🗌	NA 🗌
10. Were any san	nple containers received broke	n?	Yes		No 🗹	***
44.5						# of preserved bottles checked
	ork match bottle labels? Incies on chain of custody)		Yes	V	No 🗌	for pH: (<2 or >12 unless noted)
	correctly identified on Chain of (Custody?	Yes	V	No 🗆	Adjusted?
	analyses were requested?			V	No 🗆	
	ng times able to be met? ustomer for authorization.)		Yes		No 🗆	Checked by: Cu-Szdzi
	ing (if applicable)					
	tified of all discrepancies with t	his order?	Yes		No 🗌	NA 🗹
Person I	Notified:		Date:			
By Who	m:		/ia: eMa	a 🗇	Phone Fax	In Person
Regardi	ng:					
Client In	structions:					
16. Additional ren	marks:					
17. <u>Cooler Inforr</u> Cooler No		al Intact Seal I	No Seal Da	te	Signed By	

Client:	Timb Address	rwol	ustody Record	Turn-Around Time: Standard □ Rush Project Name: Project #:					01 H	awk	www.	AL w.ha NE -	llenv Alt	SIS viron ouqu	S L men erqu	tal.co	ВОІ			
Phone	#: 97	7-32	4-2139	18	0061		1		31. 00	0 0	10 0	_	-		-	uest				
	or Fax#:			Project Manager:				6					SO4							
QA/QC □ Star	Package: ndard		☐ Level 4 (Full Validation)	Jim Foster Sampler: J. Fost				O / MR	PCB's		8270SIMS		PO ₄ ,			ıt/Abser				
			ompliance		Sampler: J. B.J.					=	827		NO ₂ ,			esei				
	AC (Type)	□ Othe		On Ice: # of Coolers	¥es	□ No	E / TMB's (8021)	SRO	3/sə	1504	ō	sls			(OA)	P.				
	(Type)		8 _			5-0.7=0.7 (°C)	МТВ	5D(C	sticic	thoc	831	Meta	N.	(A)	mi-\	iforn				
Date	Time	Matrix	Sample Name	Container Type and #	Preservative		BTEX / MTBE	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082	EDB (Method 504.1)	PAHs by 8310	RCRA 8 Metals	CI, F, Br, NO3,	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)				
5/26/	162	GW	MWI	(3) VOA	HCI	-001	7													
1 10	1253	60	MWZ	1		-002	1					E								
	1345	5'W	MW3			-003	1													
	1420	6 N	MW4			-004	1													
	1300	6 W	MWS			-005	1													
	1544	60	MW6			-006	V	,												
V	1500	6W	DUP	1	1	-007	/													
			Trie Blank			-008	V											7	101	
			111																	
-																				
Date: Time: Relinquished by:				Received by:	Via:	Date Time	Rem	narks	5:								-			
Date:	1851	Relinquish	ed by: pmitted to Hall Environmental may be subc	Received by:	Via:	Date Time 5 77 7 7 7 7 7 7 7 7	nossil	oility 4	Anv eu	n-cont	racted	l data	will bo	clear	v noto	ted on	the arc	lutical re	nort	<u>-1</u>



Pace Analytical® ANALYTICAL REPORT



















Timberwolf Environmental, LLC

Sample Delivery Group:

L1359425

Samples Received:

05/28/2021

Project Number:

180061

Description:

Kaufman No. 1

Report To:

Jim Foster

1920 W Villa Maria, Ste 205

Bryan, TX 77807

Entire Report Reviewed By:

Olivia Studebaker

Project Manager Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received. Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page								
Tc: Table	e of Contents	2						
Ss: Samp	3							
Cn: Case	e Narrative	4						
Sr: Samp	ole Results	5						
MW1	L1359425-01	5						
MW2	L1359425-02	6						
MW3	L1359425-03	7						
MW4	L1359425-04	8						
MW5	L1359425-05	9						
MW6	L1359425-06	10						
Qc: Qua	ity Control Summary	11						
TPH b	y TCEQ Method 1005	11						
GI: Gloss	sary of Terms	12						
Al: Accre	editations & Locations	13						
Sc: Sam	ole Chain of Custody	14						





















SAMPLE SUMMARY

MW1 L1359425-01 GW			Collected by J. Foster	Collected date/time 05/26/2116:25	Received da 05/28/21 09:	
Method	Batch	Dilution				Location
wellod	Dateil	Dilution	Preparation date/time	Analysis date/time	Analyst	LOCALIOII
TPH by TCEQ Method 1005	WG1680485	1	06/03/21 01:28	06/03/21 16:42	TJD	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
MW2 L1359425-02 GW			J. Foster	05/26/2112:53	05/28/21 09:	00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1680485	1	06/03/21 01:28	06/03/21 16:58	TJD	Mt. Juliet, TN
MW3 L1359425-03 GW			Collected by J. Foster	Collected date/time 05/26/2113:45	Received da: 05/28/21 09:	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1680485	1	06/03/21 01:28	06/03/21 17:15	TJD	Mt. Juliet, TN
MW4 L1359425-04 GW			Collected by J. Foster	Collected date/time 05/26/2114:20	Received da: 05/28/21 09:	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1680485	1	06/03/21 01:28	06/03/21 17:31	TJD	Mt. Juliet, TN
MW5 L1359425-05 GW			Collected by J. Foster	Collected date/time 05/26/2115:00	Received da: 05/28/21 09:	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1680485	1	06/03/21 01:28	06/03/21 18:04	TJD	Mt. Juliet, TN
MW6 L1359425-06 GW			Collected by J. Foster	Collected date/time 05/26/2115:44	Received da: 05/28/21 09:	
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location

WG1680485



















TPH by TCEQ Method 1005

date/time

06/03/21 01:28

date/time

06/03/21 18:20

TJD

Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



















Olivia Studebaker Project Manager

Sample Delivery Group (SDG) Narrative

pH outside of method requirement.

Lab Sample ID L1359425-03 Project Sample ID

MW3

Method

TCEQ Method 1005

Page 205 of 252

SAMPLE RESULTS - 01

L1359425

Collected date/time: 05/26/21 16:25 TPH by TCEQ Method 1005

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	06/03/2021 16:42	WG1680485
TPH C12 - C28	U		0.600	0.900	0.900	1	06/03/2021 16:42	WG1680485
TPH C28 - C35	U		0.600	0.900	0.900	1	06/03/2021 16:42	WG1680485
TPH C6 - C35	U		0.600	0.900	0.900	1	06/03/2021 16:42	WG1680485
(S) o-Terphenyl	73.9				70.0-130		06/03/2021 16:42	WG1680485



















Page 206 of 252

SAMPLE RESULTS - 02

L1359425

Collected date/time: 05/26/21 12:53 TPH by TCEQ Method 1005

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	06/03/2021 16:58	WG1680485
TPH C12 - C28	U		0.600	0.900	0.900	1	06/03/2021 16:58	WG1680485
TPH C28 - C35	U		0.600	0.900	0.900	1	06/03/2021 16:58	WG1680485
TPH C6 - C35	U		0.600	0.900	0.900	1	06/03/2021 16:58	WG1680485
(S) o-Terphenyl	76.4				70.0-130		06/03/2021 16:58	WG1680485



















Page 207 of 252

SAMPLE RESULTS - 03

L1359425

Collected date/time: 05/26/21 13:45 TPH by TCEQ Method 1005

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	06/03/2021 17:15	WG1680485
TPH C12 - C28	U		0.600	0.900	0.900	1	06/03/2021 17:15	WG1680485
TPH C28 - C35	U		0.600	0.900	0.900	1	06/03/2021 17:15	WG1680485
TPH C6 - C35	U		0.600	0.900	0.900	1	06/03/2021 17:15	WG1680485
(S) o-Terphenyl	76.1				70.0-130		06/03/2021 17:15	WG1680485



















Page 208 of 252

SAMPLE RESULTS - 04

L1359425

Collected date/time: 05/26/21 14:20 TPH by TCEQ Method 1005

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	06/03/2021 17:31	WG1680485
TPH C12 - C28	U		0.600	0.900	0.900	1	06/03/2021 17:31	WG1680485
TPH C28 - C35	U		0.600	0.900	0.900	1	06/03/2021 17:31	WG1680485
TPH C6 - C35	U		0.600	0.900	0.900	1	06/03/2021 17:31	WG1680485
(S) o-Terphenyl	78.2				70.0-130		06/03/2021 17:31	WG1680485



















Page 209 of 252

SAMPLE RESULTS - 05

L1359425

Collected date/time: 05/26/21 15:00 TPH by TCEQ Method 1005

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	06/03/2021 18:04	WG1680485
TPH C12 - C28	U		0.600	0.900	0.900	1	06/03/2021 18:04	WG1680485
TPH C28 - C35	U		0.600	0.900	0.900	1	06/03/2021 18:04	WG1680485
TPH C6 - C35	U		0.600	0.900	0.900	1	06/03/2021 18:04	WG1680485
(S) o-Terphenyl	74.9				70.0-130		06/03/2021 18:04	WG1680485



















Page 210 of 252

SAMPLE RESULTS - 06

L1359425

Collected date/time: 05/26/21 15:44 TPH by TCEQ Method 1005

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	0.644	<u>J</u>	0.600	0.900	0.900	1	06/03/2021 18:20	WG1680485
TPH C12 - C28	U		0.600	0.900	0.900	1	06/03/2021 18:20	WG1680485
TPH C28 - C35	U		0.600	0.900	0.900	1	06/03/2021 18:20	WG1680485
TPH C6 - C35	0.644	J	0.600	0.900	0.900	1	06/03/2021 18:20	WG1680485
(S) o-Terphenyl	76.1				70.0-130		06/03/2021 18:20	WG1680485



















Page 211 of 252

QUALITY CONTROL SUMMARY

L1359425-01,02,03,04,05,06

TPH by TCEQ Method 1005

Method Blank (MB)

	140.0
(MB) R3662807-1	06/03/21 11:28

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
TPH C6 - C12	U		0.600	0.900
TPH C12 - C28	U		0.600	0.900
TPH C28 - C35	U		0.600	0.900
TPH C6 - C35	U		0.600	0.900
(S) o-Terphenyl	<i>75.8</i>			70.0-130



¹Cp

²Tc





Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3662807-2	06/03/2111:44 •	(LCSD) R3662807-3	06/03/21 12:01

(LCS) R3662607-2 06/03/	/21 11.44 • (LCSL) K30020U7-3	00/03/21 12.0	/ 1						
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
TPH C6 - C12	41.7	38.9	39.4	93.3	94.5	75.0-125			1.28	20
TPH C12 - C28	41.7	38.2	37.3	91.6	89.4	75.0-125			2.38	20
TPH C6 - C35	83.4	77.1	76.7	92.4	92.0	75.0-125			0.520	20
(S) o-Terphenyl				77.5	75.2	70.0-130				









PAGE:

11 of 14

L1358840-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1358840-02 06/03/21 12:17 • (MS) R3662807-4 06/03/21 12:33 • (MSD) R3662807-5 06/03/21 12:50

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TPH C6 - C12	37.3	U	34.5	35.2	92.5	94.1	1	75.0-125			2.01	20
TPH C12 - C28	37.3	U	33.1	33.8	88.7	90.4	1	75.0-125			2.09	20
TPH C6 - C35	74.6	0.951	67.6	69.0	89.3	90.9	1	75.0-125			2.05	20
(S) o-Terphenyl					75.4	<i>75.3</i>		70.0-130				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

Appreviations and	Definitions
MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The identification of the analyte is acceptable; the reported value is an estimate.





















Pace Analytical National	12065 Lebanon Rd Mount Juli	et TN 37122
i ace Analytical National	12000 Lebanon Na Mount Jun	

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky 16	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	Al30792	Tennessee 14	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA - ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234



^{*} Not all certifications held by the laboratory are applicable to the results reported in the attached report.

TN00003

EPA-Crypto



















 $^{^* \, \}text{Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.} \\$

			Billing Info	ormation:		TI		Analysis / Con	tainer / Preserva	ative		Chain of Custody	Pageof
Timberwolf Env	iranment	/				Pres Chk				1.65		Pace A Nutional Ces	Analytical *
Byga Do												· ·	
Report to:			Email To:	(A) (A)	V							12065 Lebanon Rd Mount Juliet, TN 37: Phone: 615-758-585	
Project Description:		City/State Collected:			F					Phone: 800-767-585 Fax: 615-758-5859			
Phone: Fax:	Client Project #		Lab Project #			HdL					D1	D109	
Collected by (print):	Site/Facility ID #		P.O. #			5					Acctnum:		
Collected by (signature):	Rush? (Lab MUST Be Notified) Same DayFive Day Next Day5 Day (Rad Only) Two Day10 Day (Rad Only) Three Day		Quote # Date Results Needed No. of		9					Template: Prelogin:			
Immediately Packed on Ice NY						(3					TSR: PB:		
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs						Shipped Via:	Sample # (lab only)
MUL		GW	er oder	5/26/21	1625	2							-01
MWZ		1		1	1253	2		7.53		in			-02
MW3					1345	2	/			15.5		7 7 7	- 03
MW4				1	1420	2	1	A H					10,
MW5			75 AV		1500	2	1			9		1	-05
466		V		V	1544	2	V						196
M				di .	12.1				15				
Zi Z	1 2 3							4. u. i. y.					
												T. Ann	
								2000					
Matrix: S - Soil AIR - Air F - Filter W - Groundwater B - Bioassay W - WasteWater	Remarks:							pH	Temp Other		COC Signe Bottles	<pre>imple Receipt C Present/Intact ed/Accurate: arrive intact: bottles used:</pre>	hecklist : NP Y N Y N
DW - Drinking Water Samples returned via: OT - Other UPS FedEx Courier		rier	Tracking# 9 &		988	63 0088 4197			Sufficien	ole Y N			
Relinquished by : (Signature) Date: T		Time: R	Received by: (Signa	Trip Blank F	Received: Yes / HCL TBR	MeoH	VOA Zero Headspace:N Preservation Correct/Checked:YN						
Relinquished by : (Signature)	200	Date:			Received by: (Signa	ature)	# -	Temp: A	3°C Bottles F		If preserva	tion required by Lo	gin: Date/Time
Relinquished by : (Signature)	023 3.54.27 1	Date:	1	Fime: R	Received for lab by	: (Signatur	e)	S/28/	12 Time	or	Hold:		Condition: NCF / OK



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

September 21, 2021

Jim Foster Timberwolf Environmental 1920 W Villa Maria Ste 205 Bryan, TX 77807

TEL: (979) 324-2139

FAX

RE: 180061 OrderNo.: 2109590

Dear Jim Foster:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/11/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order: **2109590**Date Reported: **9/21/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 2109590

Project: 180061

Lab ID: 2109590-001 **Collection Date:** 9/9/2021 2:30:00 PM

Client Sample ID: MW 1 Matrix: AQUEOUS

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 9/14/2021 6:02:01 PM B81272 μg/L 1 Toluene ND 1.0 μg/L 9/14/2021 6:02:01 PM B81272 ND Ethylbenzene 1.0 μg/L 1 9/14/2021 6:02:01 PM B81272 Xylenes, Total ND 2.0 μg/L 9/14/2021 6:02:01 PM B81272 Surr: 4-Bromofluorobenzene 70-130 %Rec 9/14/2021 6:02:01 PM 91.7 B81272

Lab ID: 2109590-002 **Collection Date:** 9/9/2021 12:55:00 PM

Client Sample ID: MW 2 Matrix: AQUEOUS

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 μg/L 9/14/2021 6:25:48 PM B81272 1 Toluene ND 1.0 μg/L 9/14/2021 6:25:48 PM B81272 ND Ethylbenzene 1.0 9/14/2021 6:25:48 PM B81272 μg/L 1 Xylenes, Total ND 2.0 μg/L 1 9/14/2021 6:25:48 PM B81272 Surr: 4-Bromofluorobenzene 91.3 70-130 %Rec 9/14/2021 6:25:48 PM B81272

Lab ID: 2109590-003 **Collection Date:** 9/9/2021 1:45:00 PM

Client Sample ID: MW 3 Matrix: AQUEOUS

RL Qual Units DF Date Analyzed Analyses Result **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1 0 μg/L 9/14/2021 6:49:33 PM B81272 1 Toluene ND 1.0 μg/L 9/14/2021 6:49:33 PM B81272 Ethylbenzene ND 1.0 B81272 μg/L 1 9/14/2021 6:49:33 PM Xylenes, Total ND 9/14/2021 6:49:33 PM B81272 2.0 μg/L Surr: 4-Bromofluorobenzene 88.5 70-130 %Rec 9/14/2021 6:49:33 PM B81272

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 4

Analytical Report

Lab Order: **2109590**Date Reported: **9/21/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Lab Order: 2109590

Project: 180061

Lab ID: 2109590-004 **Collection Date:** 9/9/2021 3:40:00 PM

Client Sample ID: MW 4 Matrix: AQUEOUS

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 9/14/2021 7:13:21 PM B81272 μg/L 1 Toluene ND 1.0 μg/L 9/14/2021 7:13:21 PM B81272 ND Ethylbenzene 1.0 μg/L 1 9/14/2021 7:13:21 PM B81272 Xylenes, Total ND 2.0 9/14/2021 7:13:21 PM B81272 μg/L Surr: 4-Bromofluorobenzene 88.8 70-130 %Rec 9/14/2021 7:13:21 PM B81272

Lab ID: 2109590-005 **Collection Date:** 9/9/2021 4:22:00 PM

Client Sample ID: MW 5 Matrix: AQUEOUS

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 μg/L 9/14/2021 7:37:06 PM B81272 1 Toluene ND 1.0 μg/L 9/14/2021 7:37:06 PM B81272 ND Ethylbenzene 1.0 9/14/2021 7:37:06 PM B81272 μg/L 1 Xylenes, Total ND 2.0 μg/L 1 9/14/2021 7:37:06 PM B81272 Surr: 4-Bromofluorobenzene 88.6 70-130 %Rec 9/14/2021 7:37:06 PM B81272

Lab ID: 2109590-006 **Collection Date:** 9/9/2021 5:30:00 PM

Client Sample ID: MW 6 Matrix: AQUEOUS

RL Qual Units DF Date Analyzed Analyses Result **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1 0 μg/L 9/14/2021 8:00:48 PM B81272 1 Toluene ND 1.0 μg/L 9/14/2021 8:00:48 PM B81272 Ethylbenzene ND 1.0 B81272 μg/L 1 9/14/2021 8:00:48 PM Xylenes, Total ND 9/14/2021 8:00:48 PM B81272 2.0 μg/L Surr: 4-Bromofluorobenzene 91.3 70-130 %Rec 9/14/2021 8:00:48 PM B81272

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 4

Analytical Report

Lab Order: 2109590

Date Reported: 9/21/2021

Hall Environmental Analysis Laboratory, Inc.

Lab Order: 2109590

CLIENT: Timberwolf Environmental

Project: 180061

Lab ID: 2109590-007 **Collection Date:** 9/9/2021 4:22:00 PM

Client Sample ID: DUP Matrix: AQUEOUS

RL Qual Units DF Date Analyzed **Analyses** Result **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 9/14/2021 9:58:55 PM B81272 μg/L 1 Toluene ND 1.0 μg/L 9/14/2021 9:58:55 PM B81272 ND Ethylbenzene 1.0 μg/L 1 9/14/2021 9:58:55 PM B81272 Xylenes, Total ND 2.0 μg/L 9/14/2021 9:58:55 PM B81272 1 Surr: 4-Bromofluorobenzene 87.2 70-130 %Rec 9/14/2021 9:58:55 PM B81272

Lab ID: 2109590-008 Collection Date:

Client Sample ID: Trip Blank Matrix: TRIP BLANK

Analyses Result RL Qual Units DF Date Analyzed **Batch ID EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 μg/L 9/14/2021 10:22:24 PM B81272 1 Toluene ND 1.0 μg/L 9/14/2021 10:22:24 PM B81272 ND Ethylbenzene 1.0 9/14/2021 10:22:24 PM B81272 μg/L 1 Xylenes, Total ND 2.0 μg/L 1 9/14/2021 10:22:24 PM B81272 Surr: 4-Bromofluorobenzene 87 1 70-130 %Rec 9/14/2021 10:22:24 PM B81272

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 4

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

18

WO#: **2109590**

21-Sep-21

Client: Timberwolf Environmental

Project: 180061

Surr: 4-Bromofluorobenzene

Sample ID: mb SampType: MBLK TestCode: EPA Method 8021B: Volatiles PBW Client ID: Batch ID: **B81272** RunNo: 81272 Units: µg/L Prep Date: Analysis Date: 9/14/2021 SeqNo: 2870097 PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Benzene ND 1.0 Toluene ND 1.0 ND 1.0 Ethylbenzene Xylenes, Total ND 2.0

90.3

70

130

Sample ID: 100ng btex Ics SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSW Batch ID: **B81272** RunNo: 81272 Units: µg/L Prep Date: Analysis Date: 9/14/2021 SeqNo: 2870098 Analyte PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 18 20.00 0 91.8 80 120 1.0 Benzene Toluene 19 1.0 20.00 0 94.4 80 120 19 20.00 0 94.6 80 120 Ethylbenzene 1.0 57 2.0 60.00 0 94.3 80 120 Xylenes, Total 20.00 Surr: 4-Bromofluorobenzene 18 91.0 70 130

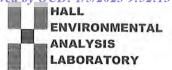
20.00

Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 4



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name:	Timberwolf Environmental	Work Order Num	ber: 210	9590		RcptN	lo: 1
Received By:	Desiree Dominguez	9/11/2021 8:50:00	АМ		Da		
Completed By:	Desiree Dominguez	9/11/2021 12:11:1	1 PM		TO		
Reviewed By:	Jn9/13/21				- 3		
Chain of Cus	tody						
1. Is Chain of Cu	ustody complete?		Yes	V	No 🗌	Not Present	
2. How was the	sample delivered?		Cou	rier			
Log In							
1 -11 11111	pt made to cool the samples?		Yes	V	No 🗌	NA 🗆	
4. Were all samp	oles received at a temperature	of >0° C to 6.0°C	Yes	V	No 🗆	NA 🗆	
5. Sample(s) in p	proper container(s)?		Yes	V	No 🗌		
6. Sufficient sam	ple volume for indicated test(s	?	Yes	V	No 🗌		
7. Are samples (e	except VOA and ONG) properl	y preserved?	Yes	~	No 🗌		
8. Was preservat	tive added to bottles?		Yes		No 🔽	NA 🗆	
9. Received at lea	ast 1 vial with headspace <1/4	for AQ VOA?	Yes	V	No 🗌	NA 🗆	
10. Were any sam	nple containers received broke	n?	Yes		No 🗸	# of preserved	
	rk match bottle labels? ncies on chain of custody)		Yes	V	No 🗌	bottles checked for pH:	of >12 unless noted)
	orrectly identified on Chain of	Custody?	Yes	V	No 🗆	Adjusted?	
13. Is it clear what	analyses were requested?		Yes	V	No 🗌		101 0
	ng times able to be met? stomer for authorization.)		Yes	V	No 🗌	Checked by:	mra 9
Special Handli	ing (if applicable)						/
	tified of all discrepancies with t	his order?	Yes		No 🗌	NA 🗸	
Person I	Notified:	Date					
By Who		Via:	eM	ail 🗆	Phone Fax	x In Person	
Regardin		-		-] i ilolia [] i ai	in r clour	
	structions:						
16. Additional ren	narks:						
17. <u>Cooler Inforr</u> Cooler No	THE RESERVE AND ASSESSMENT OF THE PARTY OF T	al Intact Seal No	Seal D	ate	Signed By		

Chain-of-C	Chain-of-Custody Record	Turn-Around T	Time:						COL	CNIVIDONIMENTAL	eivea
Client: (m be/ ws)	SF Environmend	☐ Standard	□ Rush				NAI	YST		ANALYSTS LABORATORY	l by (
		Project Name:	ii				led www	environ	www hallenvironmental com		OCD
Mailing Address:		180061	le!		490	4901 Hawkins NE	ns NE -	Albuqu	erdue. N	Albuquerque, NM 87109	: 1/5/
		Project #:			Tel	Tel. 505-345-3975	5-3975	Fax	Fax 505-345-4107	-4107	/202.
Phone #:							A	nalysis	Analysis Request		3 9::
email or Fax#: Jim &	I teamtimberryolf, cor	Project Manager:	iger:					ÞΟ	(tr		2:1
QA/QC Package:		-	L.L.		MR	s'8	SM	S 'Þ	1980		3 A
以 Standard	☐ Level 4 (Full Validation)	J.M. russ	123		/ 03	ьс	VIS0	ОЧ	ΙΑ∖Ιr		И
Accreditation:	☐ Az Compliance	Sampler:			N D K		728	10 ⁵ '	iəse		
	er	On Ice:	⊠ Yes	oN □	0			۷ '			
☐ EDD (Type)		# of Coolers:	1	District Control of the Control of t	AÐ)				_		
		Cooler Temp(including CF):	o	(00) 8'0=0'0-8	I PD						
Date Time Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	3TEX /	8081 Pe	AHS by	SSE0 (V	S) 0758 S) 0528 O) 0539		
1430				(
1355	MW 2			-003	7						
1345	MW3			-003	\				H		
18780	MWY			400-	\						
1622	MWS			-015	>						
V 1730	MWG			900-	1						
1622	230			-007	7						
>	Tro Blank			200	7						
1											
	/		7	7							
			/								
/		/									
Date; Time: Relinquished by:	shed by:	Received by:	Via: / / / / / / / / / / / / / / / / / / /	Date Time	Remarks:						Pag
Date: 4 Time: Relinguished by:	shed by:	Received by:	Via:	Date Time	- 4						e 221 of
If necessary, samples s	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.	Contracted to other a	credited laboratorie	is. This serves as notice of thi	l s possibility. An	y sub-contr	acted data	vill be clearly	v notated on	the analytical report.	252



Pace Analytical® ANALYTICAL REPORT

September 22, 2021



















Timberwolf Environmental, LLC

L1402334 Sample Delivery Group: Samples Received: 09/11/2021

Project Number: HEC - 180061 Description: Kaufman No. 1

Report To: Jim Foster

1920 W Villa Maria, Ste 205

Bryan, TX 77807

Entire Report Reviewed By:

Olivia Studebaker

Project Manager Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received. Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cov	er Page	1
Tc: Table	e of Contents	2
Ss: Sam	ple Summary	3
Cn: Case	e Narrative	4
Sr: Samp	ole Results	5
MW1	L1402334-01	5
MW2	L1402334-02	6
MW3	L1402334-03	7
MW4	L1402334-04	8
MW5	L1402334-05	9
MW6	L1402334-06	10
Qc: Qua	lity Control Summary	11
TPH b	y TCEQ Method 1005	11
GI: Gloss	sary of Terms	14
Al: Accre	editations & Locations	15
Sc: Sam	ple Chain of Custody	16



















SAMPLE SUMMARY

MW1 L1402334-01 GW			Collected by	Collected date/time 09/09/2114:30	Received date 09/11/21 10:0	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1741449	1	09/20/21 17:28	09/21/21 14:21	JN	Mt. Juliet, TN
MW2 L1402334-02 GW			Collected by	Collected date/time 09/09/2112:55	Received da: 09/11/21 10:0	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1742225	1	09/21/21 14:30	09/21/21 21:25	JN	Mt. Juliet, TN
MW3 L1402334-03 GW			Collected by	Collected date/time 09/09/2113:45	Received data	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1742225	1	09/21/21 14:30	09/21/21 21:39	JN	Mt. Juliet, TN
MW4 L1402334-04 GW			Collected by	Collected date/time 09/09/2115:40	Received da: 09/11/21 10:0	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1742227	1	09/19/21 14:20	09/20/21 04:14	JN	Mt. Juliet, TN
MW5 L1402334-05 GW			Collected by	Collected date/time 09/09/2116:22	Received da: 09/11/21 10:0	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
TPH by TCEQ Method 1005	WG1742227	1	09/19/21 14:20	09/20/21 04:28	JN	Mt. Juliet, TN
MW6 L1402334-06 GW			Collected by	Collected date/time 09/09/2117:30	Received da: 09/11/21 10:0	
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location

WG1742227



















TPH by TCEQ Method 1005

date/time

09/19/21 14:20

date/time

09/20/21 04:42

JN

Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



















Page 226 of 252

SAMPLE RESULTS - 01

L1402334

Collected date/time: 09/09/21 14:30 TPH by TCEQ Method 1005

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	09/21/2021 14:21	WG1741449
TPH C12 - C28	U		0.600	0.900	0.900	1	09/21/2021 14:21	WG1741449
TPH C28 - C35	U		0.600	0.900	0.900	1	09/21/2021 14:21	WG1741449
TPH C6 - C35	U		0.600	0.900	0.900	1	09/21/2021 14:21	WG1741449
(S) o-Terphenyl	94.7				70.0-130		09/21/2021 14:21	WG1741449



















Page 227 of 252

SAMPLE RESULTS - 02

L1402334

Collected date/time: 09/09/21 12:55 TPH by TCEQ Method 1005

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	09/21/2021 21:25	WG1742225
TPH C12 - C28	U		0.600	0.900	0.900	1	09/21/2021 21:25	WG1742225
TPH C28 - C35	U		0.600	0.900	0.900	1	09/21/2021 21:25	WG1742225
TPH C6 - C35	U		0.600	0.900	0.900	1	09/21/2021 21:25	WG1742225
(S) o-Terphenyl	104				70.0-130		09/21/2021 21:25	WG1742225



















Page 228 of 252

SAMPLE RESULTS - 03

L1402334

Collected date/time: 09/09/21 13:45 TPH by TCEQ Method 1005

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	09/21/2021 21:39	WG1742225
TPH C12 - C28	U		0.600	0.900	0.900	1	09/21/2021 21:39	WG1742225
TPH C28 - C35	U		0.600	0.900	0.900	1	09/21/2021 21:39	WG1742225
TPH C6 - C35	U		0.600	0.900	0.900	1	09/21/2021 21:39	WG1742225
(S) o-Terphenyl	108				70.0-130		09/21/2021 21:39	WG1742225



















Page 229 of 252

SAMPLE RESULTS - 04

L1402334

Collected date/time: 09/09/21 15:40 TPH by TCEQ Method 1005

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	09/20/2021 04:14	WG1742227
TPH C12 - C28	U		0.600	0.900	0.900	1	09/20/2021 04:14	WG1742227
TPH C28 - C35	U		0.600	0.900	0.900	1	09/20/2021 04:14	WG1742227
TPH C6 - C35	U		0.600	0.900	0.900	1	09/20/2021 04:14	WG1742227
(S) o-Terphenyl	95.2				70.0-130		09/20/2021 04:14	WG1742227



















Page 230 of 252

SAMPLE RESULTS - 05

L1402334

Collected date/time: 09/09/21 16:22 TPH by TCEQ Method 1005

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	09/20/2021 04:28	WG1742227
TPH C12 - C28	U		0.600	0.900	0.900	1	09/20/2021 04:28	WG1742227
TPH C28 - C35	U		0.600	0.900	0.900	1	09/20/2021 04:28	WG1742227
TPH C6 - C35	U		0.600	0.900	0.900	1	09/20/2021 04:28	WG1742227
(S) o-Terphenyl	91.4				70.0-130		09/20/2021 04:28	WG1742227



















Page 231 of 252

SAMPLE RESULTS - 06

L1402334

Collected date/time: 09/09/21 17:30 TPH by TCEQ Method 1005

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
TPH C6 - C12	U		0.600	0.900	0.900	1	09/20/2021 04:42	WG1742227
TPH C12 - C28	U		0.600	0.900	0.900	1	09/20/2021 04:42	WG1742227
TPH C28 - C35	U		0.600	0.900	0.900	1	09/20/2021 04:42	WG1742227
TPH C6 - C35	U		0.600	0.900	0.900	1	09/20/2021 04:42	WG1742227
(S) o-Terphenyl	96.7				70.0-130		09/20/2021 04:42	WG1742227



















QUALITY CONTROL SUMMARY

Page 232 of 252

L1402334-01

TPH by TCEQ Method 1005

Method Blank (MB)

(MB) R3706598-1 09	/21/21 06:50			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
TPH C6 - C12	U		0.600	0.900
TPH C12 - C28	U		0.600	0.900
TPH C28 - C35	U		0.600	0.900
TPH C6 - C35	U		0.600	0.900
(S) o-Terphenyl	112			70.0-130

²Tc







Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3706598-2 09/	'21/21 07:03 • (LCS	D) R3706598	3-3 09/21/21 07	:17							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%	
TPH C6 - C12	41.7	41.0	45.8	98.3	110	75.0-125			11.1	20	
TPH C12 - C28	41.7	40.0	43.5	95.9	104	75.0-125			8.38	20	
TPH C6 - C35	83.4	81.0	89.3	97.1	107	75.0-125			9.75	20	
(S) o-Terphenyl				110	116	70.0-130					











QUALITY CONTROL SUMMARY

Page 233 of 252

TPH by TCEQ Method 1005

L1402334-02,03

Method Blank (MB)

(MB) R3707084-1 09/	/21/21 19:19			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
TPH C6 - C12	U		0.600	0.900
TPH C12 - C28	U		0.600	0.900
TPH C28 - C35	U		0.600	0.900
TPH C6 - C35	U		0.600	0.900
(S) o-Ternhenyl	109			70 0-130









⁵Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3707084-2 09/21/	21 19:33 • (LCSI	D) R3707084-3	3 09/21/21 19:46	6							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%	
TPH C6 - C12	41.7	40.0	40.9	95.9	98.1	75.0-125			2.22	20	
TPH C12 - C28	41.7	39.0	39.7	93.5	95.2	75.0-125			1.78	20	
TPH C6 - C35	83.4	79.0	80.6	94.7	96.6	75.0-125			2.01	20	
(S) o-Terphenyl				101	104	70.0-130					





Page 234 of 252

QUALITY CONTROL SUMMARY

L1402334-04,05,06

TPH by TCEQ Method 1005

Method Blank (MB)

(MB) R3706109-1 09	/20/21 03:13			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
TPH C6 - C12	U		0.600	0.900
TPH C12 - C28	U		0.600	0.900
TPH C28 - C35	U		0.600	0.900
TPH C6 - C35	U		0.600	0.900
(S) o-Terphenyl	98.2			70.0-130



²Tc





Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3706109-2 09/2	0/21 03:46 • (LCS	SD) R3706109	-3 09/20/21 04	:00							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%	
TPH C6 - C12	40.1	36.8	37.9	91.8	95.7	75.0-125			2.95	20	
TPH C12 - C28	40.1	37.9	35.7	94.5	90.2	75.0-125			5.98	20	
TPH C6 - C35	80.2	74.7	73.6	93.1	93.0	75.0-125			1.48	20	
(S) o-Terphenyl				101	96.5	70.0-130					







Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the resu reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section fo each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

















Pace Analytical National	12065 Lebanon Ro	1 Mount Juliet	TN 37122
i acc Analytical National		a iviounit dunct.	, 114 0/122

, , , , , , , , , , , , , , , , , , , ,			
Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky 16	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	Al30792	Tennessee 1 4	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234



^{*} Not all certifications held by the laboratory are applicable to the results reported in the attached report.

TN00003

EPA-Crypto



















 $^{^* \, \}text{Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.} \\$

	_	,	Balling Info	rmation:		T			Analysis /	Containe	r / Preservative		Chain of Custody	Page of
Tin Lewolf &	avsmi	nente				Pres Chk							Pace Nutional Ce	Analytical* ofter far Testing & Innovation
Report to: Jim Foster Project Description: 180061			Email To:	O fear City/State Collected:	tinkews	o (F.C	~						12065 Lebanon Rd Mount Juliet, TN 37 Phone: 615-758-58! Phone: 800-767-58! Fax: 615-758-5859	8 63 64
Phone: Fax:	Client Project	#		Lab Project #			1005						H07	4
Collected by (print):	Site/Facility ID	#		P.O. #			14						Acctnum:	
Collected by (signature): Immediately Packed on Ice N Y	Same Da		Day	Quote #	lesults Needed	No.	7-Hd						Template: Prelogin: TSR: PB:	
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	1						Shipped Via:	Sample # (lab only)
MWI	9	W	-	9/9/21	1430	2	1							001
MWZ MW3					1255	2	1							-03
MWY					1540	1	1							-04
MW5				1	1622	12	1							-09
MWG	*	1			1730	1								-0 <i>p</i>
						+								
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater	Remarks:						Name of the last		pH		Temp	Bottles a	mple Receipt (Present/Intace d/Accurate: rrive intact: ottles used:	hecklist
DW - Drinking Water OT - Other	Samples returned UPS _ Fe	ned via:	ırier		Tracking# 51	62	,771	27	917			Sufficien	t volume sent If Applica Headspace:	
Relinquished by : (Signature)		Date;	/21	Time: 1050	Received by: (Sign	ature)			Trip Bl	ank Recei	ved: Yes/No HCL/MeoH TBR	Preservat	ion Correct/C	
Relinquished by : (Signature)		Date:		Time:	Received by: (Sign	ature)			Templ	clto.	Bottles Received:	If preservati	on required by L	ogin: Date/Time
Relinquished by : (Signature)	00.0.51.05	Date:		Time:	Received for lab b	y: (Sign	ature)		Date: 9/1	1/21	Time: 1000	Hold:		Condition: NCF / OK

State of New Mexico Energy, Minerals and Natural Resources Department

Michele Lujan Grisham Governor

Sarah Cottrell Propst Cabinet Secretary

Todd E. Leahy, JD, PhDDeputy Cabinet Secretary

Adrienne Sandoval
Director, Oil Conservation Division



Mitch Killough Hilcorp Energy Company 1111 Travis Street Houston, TX 77002

RE: Abatement Completion Report Approval

Kaufman 001 (Incident #: NCS1833331001) AP-138

Mr. Killough,

Oil Conservation Division (OCD) has reviewed the file for the release referenced above. The available information indicates Hilcorp has met the requirements of 19.15.30 NMAC and no further corrective action is required. You are notified the referenced abatement/remediation is closed.

This finding by the OCD does not relieve Hilcorp of responsibility if future information shows a threat to ground water, surface water, human health, or the environment. Further, it does not relieve Hilcorp of responsibility for compliance with any federal, state, or local law.

Please properly plug remaining monitoring wells per requirements of the New Mexico Office of the State Engineer. Forward copies of plugging reports to OCD.Enviro@emnrd.nm.gov and to the groundwater abatement portal.

Respectfully,

Adrienne Sandoval Division Director AES/njv

Date: 10/20/2022



STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER AZTEC

John Romero, P.E. Acting State Engineer

100 Gossett Drive, Suite A Aztec, New Mexico 87410

Released to Imaging: 1/6/2023 3:54:27 PM

December 31, 2018

Hilcorp Energy Company Via Timberwolf Environmental, LLC, as Agent 382 Road 3100 Aztec, NM 87410

RE: Permit Approval for Monitoring Wells, SJ-4327 POD1-POD6; Hilcorp Energy Company; Kaufman No. 1 Release Investigation; Rural San Juan County, New Mexico

Dear Ms. Deal:

On December 28, 2018, the New Mexico Office of the State Engineer received an application for a permit for the drilling and use of six proposed new monitoring wells at the above referenced location. Enclosed is a copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page and in the attached Conditions of Approval. A receipt for the fees paid is also attached.

Please be aware that there are deadlines to submit well records for the newly installed monitoring wells. These deadlines can be found in the attached Conditions of Approval. A standardized plugging method has also been included in the Conditions of Approval for the future abandonment of the wells covered by this permit. This eliminates the need to submit a separate Well Plugging Plan of Operations for approval by the NMOSE prior to plugging, unless an alternate plugging method is proposed, required by a separate oversight agency, necessary due to incompatibility with actual conditions, or artesian conditions are encountered. The well and plugging records should be sent to the NMOSE District V, 100 Gossett Drive, Suite A, Aztec, NM, 87410.

If you have any questions regarding this permitting action, please feel free to contact me at (505) 334-4751.

Sincerely,

Blaine Watson, P.G. District Manager

Water Rights Division - District V

Blue Witzon

Enclosures

cc: Aztec Reading (w/o enclosures)

SJ-4327 File WATERS

Jim Foster, Timberwolf Environmental, LLC, via e-mail: <u>jim@teamtimberwolf.com</u> Brandon Powell, NMOCD District 3, via email: <u>brandon.powell@state.nm.us</u>

OFFICE OF THE STATE ENGINEER/INTERSTATE STREAM COMMISSION - AZTEC OFFICE

OFFICIAL RECEIPT NUMBER: 5 - 6284	DATE: _12/28/2018	FILE NO.: -	SJ-4327 PODI-1	POD6
TOTAL: 25.00 RECEIVED:	Twenty-Five + nc/100		LARS CASH: CHECK NO.: 22	
PAYOR: Timber walf Environ m		w. J. 'la	Mary Rd Ste 205	-76_
CITY: Byan STATE:			ED BY: 34	
INSTRUCTIONS: Indicate the number of actions to the left of remains in district office; and goldenrod copy to accompany a	the appropriate type of filing. Complete the receipt info pplication being filed. If a mistake is made, void the original contents in the contents of the cont	rmation. Original al and all copies and	to payor; pink copy to Program Support/ASD; submit to Program Support/ASD as part of the	yellow copy daily deposit.
A. Ground Water Filing Fees	B. Surface Water Filing Fees		C. Well Driller Fees	
1. Change of Ownership of Water Right \$ 2.00	1. Change of Ownership of a Water Right	\$ 5.00	1. Application for Well Driller's License	\$ 50.00
2. Application to Appropriate or Supplement	2. Declaration of Water Right	\$ 10.00	2. Application for Renewal of Well	4 20.00
Domestic 72-12-1 Well \$ 125.00 3. Application to Repair or Deepen	3. Amended Declaration	\$ 25.00	Driller's License	\$ 50.00
72-12-1 Well \$ 75.00	4. Application to Change Point of Diversion			
4. Application for Replacement	and Place and/or Purpose of Use from Surface Water to Surface Water	A 200 00	D. Reproduction of Documents	
72-12-1 Well \$ 75.00	5. Application to Change Point of Diversion	\$ 200.00	@ 25¢/copy	\$
5. Application to Change Purpose of Use	and Place and/or Purpose of Use from			
72-12-1 Well \$ 75.00		\$ 200.00	Map(s)	\$
6. Application for Stock Well/Temp. Use \$ 5.00	6. Application to Change Point of	\$ 200.00		
		\$ 100.00	n o tre u	
	7. Application to Change Place and/or	7 100,00	E. Certification	\$
7. Application to Appropriate Irrigation,	Purpose of Use	\$ 100.00		
Municipal, or Commercial Use \$ 25.00	8. Application to Appropriate		F. *Credit Card Convenience Fee	4
8. Declaration of Water Right \$ 1.00	9. Notice of Intent to Appropriate	\$ 25.00		-
9. Application for Supplemental Non	10. Application for Extension of Time	\$ 50.00	G. Other	
72-12-1 Well \$ 25.00		\$ 100.00		7
10. Application to Change Place or	12. Return Flow Credit	\$ 100.00	C	
Purpose of Use Non 72-12-1 Well \$ 25.00	13. Proof of Completion of Works	\$ 25.00	Comments:	
11. Application to Change Point of Diversion	14. Proof of Application of Water to			
and Place and/or Purpose of Use from		\$ 25.00	T. 1 + 0 1d 11 E	1/202
Surface Water to Ground Water \$ 50.00	15. Water Development Plan	\$ 100.00	lied to Kecein #5	-6283
12. Application to Change Point of Diversion	16. Declaration of Livestock Water		Parmed at Five	
and Place and/or Purpose of Use from	Impoundment	\$ 10.00 -	Payment of 1208	
Ground Water to Ground Water \$ 50,00	17. Application for Livestock Water		additional PEDS	
13. Application to Change Point of	Impoundment	\$ 10.00 -	Activities 43 1-10	_
Diversion of Non 72-12-1 Well \$ 25.00 14. Application to Repair or Deepen			not originally pain	
Non 72-12-1 Well \$ 5.00				
5) 15 Application for Took Soul Change has a second				
15. Application for Test, Expl. Observ. Well \$ 5.00				
16. Application for Extension of Time \$ 25.00				
17. Proof of Application to Beneficial Use \$ 25.00 18. Notice of Intent to Appropriate \$ 25.00				
18. Notice of Intent to Appropriate \$ 25.00	All fees are non-refundable			
	will ices are non-reinnaght	e.		

OFFICE OF THE STATE ENGINEER/INTERSTATE STREAM COMMISSION - AZTEC OFFICE

OFFICIA	L RECEIPT NUMBER: 5 -	0202	DATE:	12-20-2018	FILE NO	: 5J-4327 PODI-6	
TOTAL:	5.00	RECEIVED:		five		DOLLARS CASH: CHECK NO.: 27	250
PAYOR:	Timbernolf E	Environment	bel	ADDRESS:	1920 W.	Villa Maria Rd., Ste	2. Zos
CITY: _	Bryan	STATE: _	TX	ZIP: <u>フラ8</u> と		CEIVED BY:	
INSTRUCT	IONS: Indicate the number of	actions to the left of t	the appropriate	type of filing. Complete the receipt	information. Origi	inal to payor; pink copy to Program Support/ASD	: vellow conv
remains in	district office; and goldenrod	copy to accompany app	plication being f	iled. If a mistake is made, void the o	riginal and all copies	s and submit to Program Support/ASD as part of the	daily deposit.
	nd Water Filing Fees		B. Surf	face Water Filing Fees		C. Well Driller Fees	
	Change of Ownership of Water I			Change of Ownership of a Water Ric	aht \$ 5.00	1. Application for Well Driller's License	\$ 50.00
2. /	Application to Appropriate or Su	ipplement	2.		\$ 10.00	2. Application for Renewal of Well	\$ 50.00
	Domestic 72-12-1 Well	\$ 125.00	3.	Amended Declaration	\$ 25.00	Driller's License	\$ 50.00
3. A	Application to Repair or Deepen		4.	Application to Change Point of Diver		Dimer 3 decrise	\$ 50.00
	72-12-1 Well	\$ 75.00	_	and Place and/or Purpose of Use fro	m	D. Reproduction of Documents	
4. #	Application for Replacement			Surface Water to Surface Water	\$ 200.00	@ 3EA/com.	
	72-12-1 Well	\$ 75.00	5.	Application to Change Point of Diver	sion	@ 25¢/copy	\$
5. A	Application to Change Purpose of	of Use		and Place and/or Purpose of Use fro	m	Man(a)	
	72-12-1 Well	\$ 75.00		Ground Water to Surface Water	\$ 200.00	Map(s)	\$
6. <i>A</i>	Application for Stock Well/Temp	. Use \$ 5.00	6.	Application to Change Point of			
				Diversion	\$ 100.00	E Cartification	
			7.	Application to Change Place and/or		E. Certification	\$
7. A	Application to Appropriate Irriga	tion.		Purpose of Use	\$ 100.00		
	Junicipal, or Commercial Use	\$ 25.00		Application to Appropriate	\$ 25.00	F. *Credit Card Convenience Fee	\$
8. [Declaration of Water Right	\$ 1.00	9.	Notice of Intent to Appropriate	\$ 25.00		-
9. A	Application for Supplemental No	n		Application for Extension of Time	\$ 50.00	G. Other	
	2-12-1 Well	\$ 25.00	11.	Supplemental Well to a Surface Righ	t \$ 100.00		3
10. A	Application to Change Place or		12.	Return Flow Credit	\$ 100.00		
	Purpose of Use Non 72-12-1 We	ell \$ 25.00		Proof of Completion of Works	\$ 25.00	Comments:	
11. A	Application to Change Point of D	Diversion	14.	Proof of Application of Water to		- filing fee 1	eceived
	and Place and/or Purpose of Use			Beneficial Use	\$ 25.00	0 / 101	1
	jurface Water to Ground Water		15.	Water Development Plan	\$ 100.00	tor one puggose	A MW
12. A	application to Change Point of D		16.	Declaration of Livestock Water		0 117 - 1	10
	and Place and/or Purpose of Use			Impoundment	\$ 10.00	_ @ Hilcorps k	lautiman 1
(Fround Water to Ground Water	\$ 50.00	17.	Application for Livestock Water		-20 11	1
13. A	application to Change Point of			Impoundment	\$ 10.00	site. Application	21 12
	Diversion of Non 72-12-1 Well	\$ 25.00				for 6 total Mi	120
	application to Repair or Deepen						<u> </u>
N	lon 72-12-1 Well	\$ 5.00				Meretore fees an	e neede
						for five addition	2 /
1		()				_ tor tive additt	may /
15. A	pplication for Test, Expl. Obser	v. Well \$ 500				wells.	
16. A	pplication for Extension of Time	e \$ 25.00					
	roof of Application to Beneficial						
18. N	lotice of Intent to Appropriate	\$ 25.00	-	I face and were to the	11.		
			A	Il fees are non-refunda	able.		

Received by OCD: 1/5/2023 9:52:13 AM

File No. SJ-4327 POD1-POD6

NEW MEXICO OFFICE OF THE STATE ENGINEER



WR-07 APPLICATION FOR PERMIT TO DRILL A WELL WITH NO WATER RIGHT



(check applicable box):

	For fees, see State Engineer web	site: http://www.ose.state.nm.us/	2
Purpose:	Pollution Control And/Or Recovery	☐ Ground Source Heat Pump	DEC 28 PH 2:
Exploratory Well (Pump test)	Construction Site/Public Works Dewatering	Other(Describe):	28
Monitoring Well	☐ Mine Dewatering		3
A separate permit will be required	to apply water to beneficial use re	gardless if use is consumptive or nonconsumptive.	2: 04
Temporary Request - Requeste	ed Start Date: Jan. 7th, 2019	Requested End Date: Unknown	De L
Plugging Plan of Operations Subm	nitted? 🗌 Yes 🔳 No		Ŷ.
		Comment of the Commen	
. APPLICANT(S)			-
Name: filcorp Energy Company	The second second	Name:	
Contact or Agent:	check here if Agent	Contact or Agent: check here if Age	ent 🗌
Jim Foster		THE SET OF	
Mailing Address: 82 Rd 3100		Mailing Address:	March Colonia and Art and Art
City: Aztec	-	City:	
State:	Zip Code: 87410	State: Zip Code:	
Phone: 979-324-2139 Phone (Work):	☐ Home ■ Cell	Phone:	it
E-mail (optional): im@teamtimberwolf.com		E-mail (optional):	
Im@reamumberworr.com			
	FOR OSE INTERNAL USE	Application for Permit, Form WR-07, Rev 11/17/16	
	File No.: SJ-4327 POD1-POD6	Tm. No.: Receipt No.: 5-628	2 and 5-628
	Trans Description (optional):		
	Sub-Basin:	PCW/LOG Due Date: 12/31/2019	

Received by OCD: 1/5/2023 9:52:13 AM

1	
\sim	
1.1	
776	
. N	
5	
3	
3	
7.0	
\sim	
C	
2	
5	
6	
~	
_	
-	
_	
1:	
9: 1/	
15: 1/	
ng: 1/	
ing: 1/	
ing: 1/	
ging: 1/	
aging: 1/	
aging: 1/	
naging: 1/	
maging: 1/	
naging: 1/	
Imaging: 1/	
Imaging: 1/	
o Imaging: 1/	
Imaging: 1/	
to Imaging: 1/	
o Imaging: 1/	
to Imaging: 1/	
ed to Imaging: 1/	
sed to Imaging: 1/	
ased to Imaging: 1/	
ased to Imaging: 1/	
eased to Imaging: 1/	
leased to Imaging: 1/	
eased to Imaging: 1/	

WELL(S) Describe the well(s) applicable to this applica	шог
---	-----

NM State Plane (NAD83)NM West ZoneNM East ZoneNM Central Zone	` '	JTM (NAD83) (Mete]Zone 12N]Zone 13N	Ers)
Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (Quarters or Halves, Section, Township, Range) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
SJ-4327 POD1 MW1	-108,20335	36.85989	NE/4, NW/4, Sec. 33, T31N, R13W
SJ-4327 POD2 MW2	-108.20335	36,86007	NE/4, NW/4, Sec. 33, T31N, R13W
SJ-4327 POD3 MW3	-108.20309	36,85995	NE/4, NW/4, Sec. 33, T31N, R13W
SJ-4327 POD4 MW4	-108.20335	36,85980	NE/4, NW/4, Sec. 33, T31N, R13W
SJ-4327 POD5 MW5	-108.20361	36.85977	NE/4, NW/4, Sec. 33, T31N, R13W
NOTE: If more well location Additional well descriptions Other description relating well ocated along the eastern bar	are attached: <a> <a> <a> <a> <a> <a> <a> <a> <a> <a>	res No s, streets, or other:	
Nell is on land owned by: Fed			ian (vo.) well site
			cribed, provide attachment. Attached?
Approximate depth of well (fee	et): 18	C	Outside diameter of well casing (inches): 2.375
Oriller Name: Geomat, Inc			Priller License Number: 1762
ADDITIONAL STATEMENTS	OR EXPLANATION	S	2010
			a condensate/crude oil release. ress site towards regulatory closure.

FOR OSE INTERNAL USE

Application for Permit, Form WR-07

File No.: SJ-4327 POD1-POD6

Tm No.:

	•
	e
	4
	٧
	•
- 1	e
	Э
	v
	٧
	3
	`
	,
3	
	`
	-
	1 - (1)
	1 - (1)
	1 . (1) / (1)
	1 . (1) / (1)
	1 . () () ()
1	1 . () () ()
	1 . () () ()
1	1 . () () () ()
1 000 1	1 . () () () (
1	1 . () () () (
1 000 1	1 . () () () (
1 000 1	1 . () () () (
1 000 1	1 . () () () (
1 000 1	1 . () () () (
1 000 1	1 . (1) (1) vo
1 000 1	1 . (1) (1) vo
1 000 1	1 . (1) (1) vo
1 000 1	1 . (1) (1) vo
1 000 1	1 . (1) (1) vo
1 000 1	ornod hay Ill Ill I
1 000 1	ornod hay Ill Ill I
1 000 1	ornod hay Ill Ill I
1 000 1	1 . (1) (1) vo

	QUIREMENTS: The applicant must incl the information has been included and		ch well type. Please check the appropriate
Exploratory: Include a description of any proposed pump test, if applicable. Monitoring: Include the reason for the monitoring well, and, The duration of the planned monitoring.	Pollution Control and/or Recovery Include a plan for pollution control/recovery, that includes the following: A description of the need for the pollution control or recovery operation The estimated maximum period of time for completion of the operation. The annual diversion amount. The annual consumptive use amount. The maximum amount of water to diverted and injected for the duration the operation. The method and place of discharge The method of measurement of water produced and discharged. The source of water to be injected The method of measurement of water injected. The characteristics of the aquifer. The method of determining the resulting annual consumptive use of water and depletion from any related stream system. Proof of any permit required from New Mexico Environment Department An access agreement if the applicant is not the owner of the land which the pollution plume control or recovery well is to be located.	De-Watering:	Mine De-Watering: Include a plan for pollution control/recovery, that includes the following: A description of the need for mine dewatering. The estimated maximum period of time for completion of the operation. The source(s) of the water to be diverted. The geohydrologic characteristics of the aquifer(s). The maximum amount of water to be diverted per annum. The maximum amount of water to be diverted for the duration of the operation. The quality of the water. The method of measurement of water diverted. The recharge of water to the aquifer. Description of the estimated area of hydrologic effect of the project. The method and place of discharge. An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. A description of the methods employed to estimate effects on surface water rights and underground water rights. Information on existing wells, rivers, springs, and wellands within the area of hydrologic effect.
	lim Foster	ACKNOWLEDGEMENT	200
I, We (name of	applicant(s)), Jim Foster	Print Name(s)	
affirm that the fo	pregoing statements are true to the bes	t of (my, our) knowledge and belief.	28
	1-1		
Applicant Signa	TUTO	Applicant Signature	
/		ON OF THE STATE ENGINEER	0 000
/		This application is:	
	X approve		denied
provided it is n Mexico nor de	ot exercised to the detriment of any oth trimental to the public welfare and furth	ers having existing rights, and is not c er subject to the <u>attached</u> conditions o	contrary to the conservation of water in New f approval.
Witness my han	d and seal this <u>31st</u> day of	December 20 18,	for the State Engineer,
J	ohn Romero, P.E.	Acting , State Engineer	
- بر ون ا	Sheet like		Blaine Watson
By: Signature	District V. Manager	Print	
Title:	- de la manager		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	FO	R OSE INTERNAL USÉ	Application for Permit, Form WR-07
'\	WOLF REN THE	No.: SJ-4327 POD1-POD6	Trn No.:

Released to Imaging: 1/6/2023 3:54:27 PM

Received by OCD: 1/5/2023 9:52:13 AM



NEW MEXICO OFFICE OF THE STATE ENGINEER

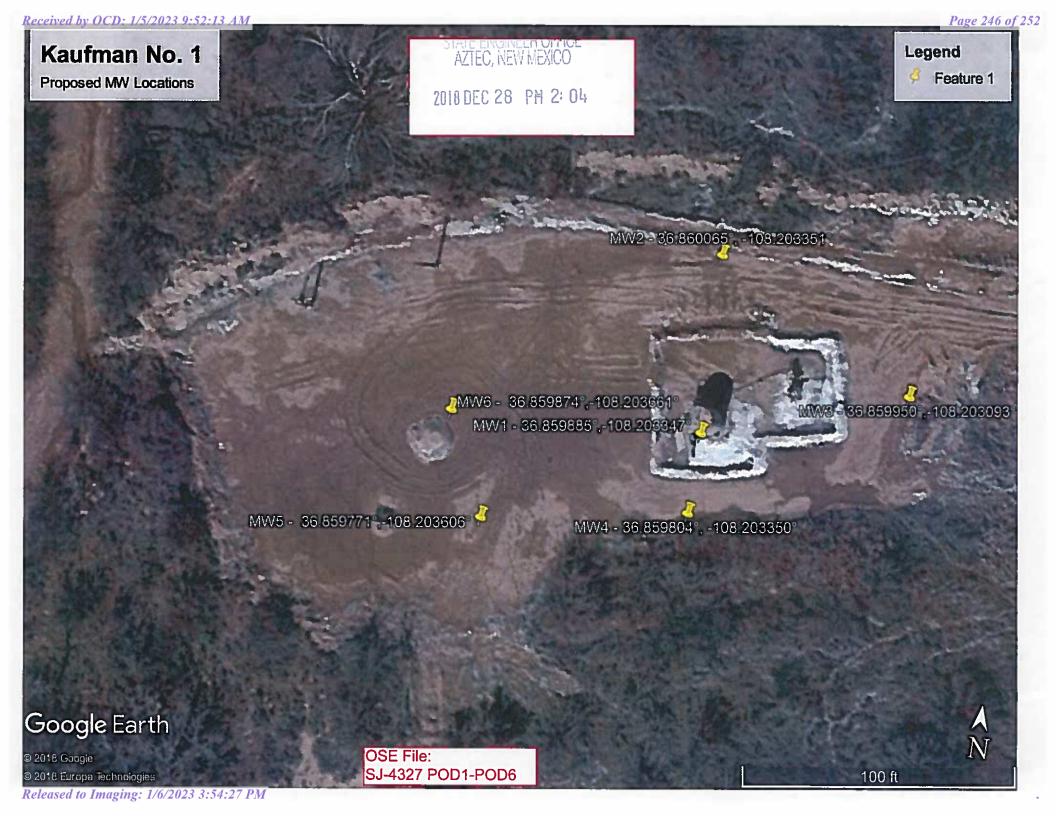


ATTACHMENT 1 **POINT OF DIVERSION DESCRIPTIONS**

This Attachment is to be completed if more than one (1) point of diversion is described on an Application or Declaration.

a. Is this a: Move-From Point of D Move-To Point of Dive	b. Information on Attachment(s): Number of points of diversion involved in the application: Total number of pages attached to the application:			6	
☐ Surface Point of Diversion	OR	■ Well			
Name of ditch, acequia	ı, or spring:				
Stream or water course	: :		·		
Tributary of:					
c. Location (Required): Required: Move to POD location	n coordinate must	be either New Me	xico State Pl	ane (NAD 83), UTM (NAD 83), or Lat/Long (WGS8	34)
NM State Plane (NAD83) (feet) NM West Zone NM Central Zone NM East Zone	UTM (NAD83) (meters) Zone 13N Zone 12N Zone 12N	■ Lat	/Long–	OTHER (allowable only for move-from descriptions - see application form for format) PLSS (quarters, section, township, range) Hydrographic Survey, Map & Tract Lot, Block & Subdivision Grant	
POD Number:	X or Longitude	Y or La	titude	Other Location Description:	
MW6 (SJ-4327 POD6)	-108.20366	36.8	5987	NE/4, NW4, Sec. 33, T31N, R13W	
POD Number:	X or Longitude	YorLa	titude	Other Location Description:	
POD Number:	X or Longitude	Y or La	titude	Other Location Description:	
POD Number:	X or Longitude	Y or La	titude	Other Location Description:	
POD Number:	X or Longitude	Y or La	litude	Other Location Description:	
POD Number:	X or Longitude	Y or La	iitude	Other Location Description:	o 15
POD Number:	X or Longitude	Y or Lat	titude	Other Location Description:	111
POD Number:	X or Longitude	Y or Lat	itude	Other Location Description:	
POD Number:	X or Longitude	Y or Lat	itude	Other Location Description:	
		FOR OSE INTERNA	AL USE	Form wr-08	

File Number: SJ-4327 POD1-POD6	Trn Number:
Trans Description (optional):	



NMOSE Permit to Drill a Well(s) With No Water Right - Conditions of Approval SJ-4327 POD1-POD6

The New Mexico Office of the State Engineer (NMOSE) has determined that existing water rights will not be impaired by this activity. This application is approved without publication provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state. This application approval (i.e., permit) is further subject to the following conditions of approval.

1. This permit is approved as follows:

Permittee(s):

Hilcorp Energy Company

(via Timberwolf Environmental, LLC, as Agent)

382 Road 3100 Aztec, NM 87410

Permit Number:

SJ-4327

Application File Date:

December 28, 2018

Priority:

N/A

Source:

Groundwater

Point(s) of Diversion:

Six points of diversion (PODs), SJ-4327 POD1 through POD6, are proposed. The PODs consist of six proposed monitoring wells (Table 1) that will be used for periodic groundwater sampling. The wells will be located at the Hilcorp Kaufman No. 1 release site located on land owned by The U.S. Department of the Interior Bureau of Land Management in rural San Juan County, New Mexico. The PODs will be located within the SE/4 NE/4 of Section 33, Township 31 North, Range 13 West, NMPM, at the following approximate point locations (Long/Lat,

Released to Imaging: 1/6/2023 3:54:27 PM

WGS84).

Table 1: Proposed New Monitoring Wells

POD Number and Owner's Well Name	Diameter	asing: (inches) and th (feet)	Longitude (Decimal Deg.)	Latitude (Decimal Deg.)
SJ-4327 POD1 (MW-1)	2	18	108.203347° W	36.859885° N
SJ-4327 POD2 (MW-2)	2	18	108.203351° W	36.860065° N
SJ-4327 POD3 (MW-3)	2	18	108.203093° W	36.859950° N
SJ-4327 POD4 (MW-4)	2	18	108.203350° W	36.859804° N
SJ-4327 POD5 (MW-5)	2	18	108.203606° W	36.859771° N
SJ-4327 POD6 (MW-6)	2	18	108.203661° W	36.859874° N

Purpose of Use:

Groundwater sampling

Place of Use:

N/A

Amount of Water:

N/A

Released to Imaging: 1/6/2023 3:54:27 PM

- 2. No water shall be appropriated and beneficially used from any wells or borings approved under this permit.
- 3. No water shall be diverted from the well(s) except for initial well development and periodic sampling purposes. Upon completion of monitoring activities the well(s) shall be plugged in accordance with Subsection C of 19.27.4.30 NMAC, unless a permit to use water is acquired from the NMOSE.
- 4. The well(s) may continue to be used indefinitely for groundwater sampling or monitoring required for the current site investigation and any associated remediation, so long as they remain in good repair. A new permit shall be obtained from the NMOSE prior to replacing a well(s) or for any change in use as approved herein.
- 5. Water well drilling and well drilling activities, including well plugging, are regulated under NMOSE Regulations 19.27.4 NMAC. These regulations apply, and provide both general and specific direction regarding the drilling of wells in New Mexico. Note that the construction of any well that allows groundwater to flow uncontrolled to the land surface or to move appreciably between geologic units is prohibited.
- 6. In accordance with Subsection A of 19.27.4.29 NMAC, on-site supervision of well drilling/plugging is required by the holder of a New Mexico Well Driller License or a NMOSE-registered Drill Rig Supervisor. The New Mexico licensed Well Driller shall ensure that well drilling activities are completed in accordance with 19.27.4.29, 19.27.4.30 and 19.27.4.31 NMAC. However, pursuant to 72-12-12 NMSA 1978 and 19.27.4.8 NMAC, a driller's license is not required for the construction of a driven well with an outside casing diameter of 2% inches or less and that does not require the use of a drill rig (e.g., auger) for installation. This exemption is not applicable to well plugging.
- 7. The permittee has not stated whether artesian conditions are likely to be encountered at the proposed well/borehole location(s). However, if artesian conditions are encountered during drilling, all rules and regulations pertaining to the drilling and casing and plugging of artesian wells shall be followed.
- 8. A Well Record documenting the as-built well construction and materials used shall be filed for each of the new wells in accordance with Subsection N of 19.27.4.29 NMAC. Well Records shall be filed with the State Engineer (NMOSE District V, 100 Gossett Drive, Suite A, Aztec, NM, 87410) within 30 days after completion of the well(s). Well installation(s) shall be complete and the well record(s) filed no later than one year from the date of approval of this permit.
- 9. If the required Well Record documentation is not received within one year of the date of permit approval, this permit will automatically expire.
- 10. When the permittee receives approval or direction to permanently abandon the well(s)/borehole(s) covered by this permit, plugging shall be performed by a New Mexico licensed well driller. The well(s)/borehole(s) shall be plugged pursuant to Subsection C of 19.27.4.30 NMAC using the following method, unless an alternate plugging method has been proposed by or on behalf of the well owner and approved by the NMOSE. If a well/borehole has

Released to Imaging: 1/6/2023 3:54:27 PM

Received by OCD: 1/5/2023 9:52:13 AM

encountered artesian conditions, a Well Plugging Plan of Operations shall be submitted and NMOSE approval obtained *prior* to the initiation of *any* well plugging activities concerning artesian wells. Additionally, if the following standardized plugging sealant is not appropriate for use due to incompatibility with the water quality or any soil and water contaminates encountered, a Well Plugging Plan of Operations shall be submitted and NMOSE approval obtained *prior* to the initiation of *any* well plugging activities.

- a. Obstructions in a well/borehole shall be identified and removed if possible. If an obstruction cannot be removed, the method used to grout below and around the obstruction shall be described in detail in the plugging record.
 - b. Prior to plugging, calculate the theoretical volume of sealant needed for abandonment of the well/borehole based on the actual measured pluggable depth of the well/borehole and the volume factor for the casing/borehole diameter. Compare the actual volume of sealant placed in the well/borehole with the theoretical volume to verify the actual volume of sealant is equal to or exceeds the theoretical volume.
 - c. Portland Type I/II cement shall be used for the plugging sealant. The water mixed with the cement to create the plugging sealant shall be potable water or of similar quality. Portland cement has a fundamental water demand of 5.2 gallons of water per 94-lb sack of cement. Up to a maximum of 6.0 gallons per 94-lb sack is acceptable to allow for greater pumpability.

Pure bentonite powder ("90 barrel yield") is allowed as a cement additive by NMOSE and American Water Works Association (AWWA) guidelines. If a bentonite additive is used, the following rates and mixing guidelines shall be followed. For a rate or a mixing procedure other than that provided below, the NMOSE District V office must be contacted for pre-approval. Neither granular bentonite nor extended-yield bentonite shall be mixed with cement for the purpose of this plugging activity. When supplementing a cement slurry with bentonite powder, water demand for the mix increases at a rate of approximately 0.65 gallon of water for each 1% increment of bentonite bdwc (by dry weight cement) above the stated base water demand of 5.2 gallons water per 94-lb sack of cement for neat cement. Bentonite powder must be hydrated separately with its required increment of water before being mixed into the wet neat cement. If water is otherwise added to the combination of dry ingredients or the dry bentonite is blended into wet cement, the alkalinity of the cement will restrict the yield of the bentonite powder, resulting in excess free water in the slurry and excessive cement shrinkage upon curing.

- d. Placement of the sealant within the well/borehole shall be by pumping through a tremie pipe extended to near the bottom of the well/borehole and kept below the top of the slurry column (i.e., immersed in the slurry) as the well/borehole is plugged from bottom upwards in a manner that displaces the standing water column.
- e. Prior to, or upon completion of plugging, the well casing may be cut-off below grade as necessary to allow for approved construction onsite, provided a minimum six-inch thickness of reinforced abandonment plugging sealant or concrete completely covers the top of the cut-off casing. Any remaining void to the surface may be filled with native soil, concrete, or asphalt as needed to match the surrounding surface material and blended with the surface topography to prevent ponding.
- f. Within 30 days after completion of well/borehole plugging, a complete Plugging Record shall be filed with the State Engineer in accordance with Paragraph (3) of

Subsection C of 19.27.4.30 NMAC for each well/boring plugged. The Well Plugging Record(s) shall be filed with the State Engineer at the NMOSE District V Office, 100 Gossett Drive, Suite A, Aztec, NM 87410. The required well plugging record form is available at http://www.ose.state.nm.us/STST/wdForms.php.

- 11. In accordance with Subsection C of 19.27.4.30 NMAC, a well/borehole that does not encounter groundwater may be immediately plugged by filling with drill cuttings or clean native fill to within 10 feet of land surface and by plugging the remaining 10 feet to the land surface with a sealant approved by the Office of the State Engineer. A Plugging Record shall be filed with the State Engineer as described above.
- 12. Should another regulatory agency sharing jurisdiction of the project authorize, or by regulation require, more stringent requirements than stated herein, the more stringent procedure should be followed. These, among others, may include provisions regarding pre-authorization to proceed, type of methods and materials used, inspection, or prohibition of free discharge of any fluid or other material to or from the well that is related to the drilling and/or monitoring process.
- 13. Pursuant to 72-12-3 NMSA 1978, the applicant may or may not have provided written documentation with the application, which the applicant claims as confirmation that access has been granted for the aforementioned well(s) to be located on property owned by someone other than the well owner/applicant. NMOSE approval of this permit in no way infers the right of access to land not owned by the well owner/applicant.
- 14. The State Engineer retains jurisdiction of this permit.

The application for drilling well(s) <u>SJ-4327 POD1-POD6</u> without a water right, submitted on <u>December 28, 2018</u>, is hereby approved with the aforesaid conditions applied, when signed by an authorized designee of the State Engineer:

Witness my hand and seal this 31st day of <u>December</u>, A.D. 2018.

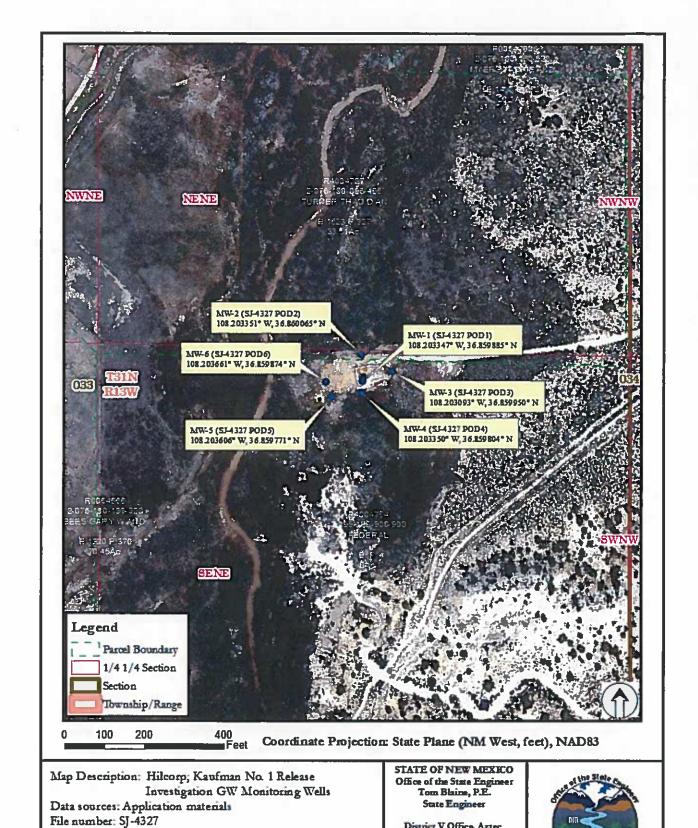
John Romero, P.E., Acting State Engineer

By:

Blaine Watson, P.G., District Manager District V Office, Water Rights Division

Received by OCD: 1/5/2023 9:52:13 AM

Aenal Photography: 2017



District V Office, Aztec

Well Location Map

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. **Santa Fe, NM 87505**

CONDITIONS

Action 172906

CONDITIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	172906
	Action Type:
	[UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Accepted for the record. Abatement terms completed.	1/6/2023