SITE CHARACTERIZATION REPORT AND STAGE 1 ABATEMENT PLAN

KAUFMAN NO. 1 HILCORP ENERGY COMPANY SAN JUAN COUNTY, NEW MEXICO OCD Incident No.: NCS1833331001

June 17, 2019

Prepared for:



HILCORP ENERGY COMPANY

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At the request of Hilcorp Energy Company (Hilcorp), Timberwolf Environmental, LLC (Timberwolf) presents this site characterization report and stage 1 abatement plan for the Kaufman No. 1 (Site). This document was prepared by the following Timberwolf personnel:

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Site Characterization Report and Abatement Plan Hilcorp Energy Company - Kaufman No. 1 San Juan County, New Mexico

Date

6/17/19

Date

Date

6/17/19

6/17/19

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August 29, 2019

Jennifer Deal Hilcorp Energy Company 382 Road 3100 Aztec, New Mexico 87401 *jdeal@hilcorp.com* Adrienne Sandoval Director, Oil Conservation Division



RE: Determination of Administrative Completeness for Stage 1 Abatement Plan (AP-138) Concerning Groundwater Contamination Associated with the Kaufman #1 Production Well (API #30-045-10174)

Ms. Deal,

On June 18, 2019 the New Mexico Oil Conservation Division (OCD) received a Stage 1 Abatement Plan associated with a release at the Kaufman #1. We have preliminarily reviewed the plan and determined it to be administratively complete. The required written and public notice should now proceed under the provisions of 19.15.30.15 A and B NMAC with proof of notice provided to the OCD.

The OCD will provide notice of the plan's filing as well as continue our review and either approve the plan or notify Hilcorp of any deficiencies.

If you have any questions, please contact Cory Smith of my staff at (505) 334-6178 extension 115 or by email at *cory.smith@state.nm.us*. On behalf of the Oil Conservation Division, I wish to thank you and your staff for your cooperation during this process.

Respectfully

Adrienne Sandoval Director

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1.0 Overview

1.1 Introduction

At the request of Hilcorp Energy Company (Hilcorp), Timberwolf Environmental, LLC (Timberwolf) presents this site characterization report and stage 1 abatement plan for the Kaufman No. 1 (Site). The Site is located approximately 9.1 miles north of Farmington in San Juan County, New Mexico (Figures 1 - 3).

The assessment and characterization activities were intended to:

- 1) evaluate the effectiveness of initial response actions
- 2) delineate the horizontal and vertical extents of constituents of concern (COCs),
- 3) determine if groundwater had been impacted and, if necessary, delineate the horizontal extent of groundwater impacts, and
- 4) collect sufficient geotechnical data from the saturated zone to determine suitable remedial techniques for the Site (if required).

1.2 Site Description

The Site is situated on Federal land (managed by the Bureau of Land Management (BLM)) and is immediately adjacent to 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.

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

The Site is situated in a rural area and surrounding land use is predominantly recreational and oil and gas production. According to the U.S. Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS), the Site soil consists of Walrees loam, 0 to 2 percent slope – texture consists of 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)).

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

1.3 Site History

On 11/16/18, field personnel were on Site conducting routine well operations at the Kaufman No. 1. The well produced an unexpected and substantial volume of water, resulting in a tank overflow. The resultant release of approximately 8 barrels (bbls) of oil and 10 bbls of produced water was contained by the facility's secondary containment. The well was shut-in and initial cleanup operations commenced. Released fluids were recovered with a vacuum truck.

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 disposed. The excavated soil was primarily along the eastern and southern portion of the tank battery. A safety fence was constructed along the perimeter of the excavation.

1.4 Initial Soil Assessment

In November 2018 and prior to Hilcorp assuming operations, Timberwolf conducted an initial sampling event to: 1) evaluate the effectiveness of initial response actions, 2) characterize the nature of the release (i.e., identify constituents of concern (COCs)) 3) determine the concentrations of COCs at the horizontal and vertical extents of the excavation, and 4) develop recommendations for further action to address remaining impacts.

The initial soil assessment revealed COCs at the Site were petroleum hydrocarbons and that COCs were not delineated horizontally or vertically.

1.5 Soil Investigation

In January 2019, Timberwolf returned to the Site to collect additional data in an effort to better characterize the extent of soil and groundwater contamination. The activity included additional soil sampling, installation of groundwater monitoring wells, and groundwater sampling. Based on the site characterization activities, COCs present in Site soil included the following:

- Total BTEX (i.e., benzene, toluene, ethylbenzene, and xylene)
- Total petroleum hydrocarbons

Soil assessment activities are documented in Sections 3 and 4.

1.6 Groundwater Assessment

The groundwater assessment revealed the following COC present in Site groundwater:

• Benzene

Groundwater assessment activities are documented in Section 5.

1.7 Stage 1 Abatement Plan

A stage 1 abatement plan that outlines proposed additional site assessment activities which is included in Section 6. The stage 1 abatement plan is presented to achieve the following objectives:

- 1) horizontally delineate historical soil impacts located south, southwest, and west of the former tank battery
- 2) assess of the vadose zone to determine the leachability of Site soil
- 3) conduct an ecological risk assessment to ensure that risk to area threaten and endangered species is mitigated
- 4) conduct additional groundwater sampling and analysis to determine if elevated total dissolved solids (TDS) observed in a monitor well located near the point of release is a native condition of Site groundwater or is related to the release
- 5) conduct a receptor survey to identify water wells within a one-mile radius of the Site and sensitive features within a quarter-mile of the Site
- 6) conform with New Mexico Administrative Code (NMAC) 19.15.30 Remediation and provide sufficient data to present a stage 2 abatement plan

2.0 Regulatory Limits

2.1 Introduction

Regulatory oversight of soil and groundwater remediation associated with oil and gas exploration and production (E&P) activities is under the jurisdiction of the New Mexico Oil Conservation Division (NMOCD).

2.2 Regulatory Limits for Soil

The NMOCD has established remedial action levels for soils impacted by oilfield products or wastes which are documented under New Mexico Administrative Code (NMAC) Rule 19.15.29. The Rule was repealed and replaced by *Oil Conservation Commission Order No.: R-14751*, dated June 21, 2018.

Under Rule 19.15.29, soil cleanup criteria is determined primarily on the basis of the distance between the base of impacted soil and the depth to usable groundwater. However, sites with groundwater greater than 50 feet (ft) may be subject to the most stringent standard when surface water bodies and/or sensitive features (e.g., playa lakes, wetlands, or public areas) are present. NMOCD laboratory methodology and soil closure criteria are presented in Table 1.

Depth to Groundwater ¹	Constituent	Method ²	Regulatory Limit ³ (mg/kg)		
<u><</u> 50 feet	Chloride ⁴	EPA 300.0	600		
	TPH	100			
	Total BTEX	Total BTEX EPA SW-846 Method 8021B or 8260B			
	Benzene	EPA SW-846 Method 8021B or 8015M	10		
51 feet-100 feet	Chloride ⁴	EPA 300.0	10,000		
	TPH	EPA SW-846 Method 8015M	2,500		
	GRO+DRO	EPA SW-846 Method 8015M	1,000		
	Total BTEX	EPA SW-846 Method 8021B or 8260B	50		
	Benzene	EPA SW-846 Method 8021B or 8260B	10		
> 100 feet	Chloride ⁴	EPA 300.0	20,000		
	TPH	EPA SW-846 Method 8015M	2,500		
	GRO+DRO	EPA SW-846 Method 8015M	1,000		
	Total BTEX	EPA SW-846 Method 8021B or 8260B	50		
	Benzene	EPA SW-846 Method 8021B or 8015M	10		

Table 1	Closure	Criteria for	Soils Im	nacted h	y a Release
Table I.	CIOSULE	Cillena Ioi	20112 1111	ipacieu n	y a nelease

¹From base of impact to useable groundwater (i.e., less than 10,000 milligrams per liter (mg/L) total dissolved solids (TDS)) ²Or other test methods approved by the division

³Established limits or natural background level, whichever is greater

⁴Applies to produced water releases or other fluids which may contain chloride prior to site abandonment

TPH – total petroleum hydrocarbons (TPH = GRO + DRO + MRO)

GRO – gasoline range organics

DRO - diesel range organics

MRO - motor oil range organics

mg/kg – milligrams per kilograms

Total BTEX = Benzene + Toluene + Ethylbenzene + Xylene

Groundwater at the Kaufman No. 1 is less than 50 ft below ground surface (bgs); applicable regulatory limits for soil are presented in Table 2.

Constituents	Chloride mg/kg	GRO + DRO mg/kg	TPH mg/kg	Benzene mg/kg	Total BTEX mg/kg				
Regulatory Criteria for Soil60010010050									
mg/kg– milligrams per kilogram GRO – gasoline range organics DRO – diesel range organics TPH – total petroleum hydrocarbons (TPH = GRO + DRO + MRO) Total BTEX = Benzene + Toluene + Ethylbenzene + Xylene									

Table 2. Soil Regulatory Criteria – Kaufman No. 1

2.3 Regulatory Limits for Groundwater

Human health standards for usable groundwater (i.e., total dissolved solids (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, TDS, and pH. The regulatory criteria for human health or domestic water supply for these constituents are provided in Table 3.

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	1,000 ²
Chloride	250 ²
Sulfate	600 ²
pH (units – s.u.)	6 – 9 ²

Table 3. Groundwater Regulatory Criteria – Kaufman No. 1

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

3.0 Soil Assessment Methodology

3.1 Introduction

Timberwolf conducted two soil assessment events at the Site (i.e., initial assessment and site characterization) in an attempt to 1) verify if soil impacts are present, 2) to identify the COCs at the Site, 3) determine the magnitude and extent of soil impacts, and 4) sufficiently characterize site soil to evaluate various remedial techniques. Information obtained from the assessment activities was used to develop a remedial action plan or abatement plan. Soil assessment methodology is presented below.

3.2 Environmental Soil Sampling Methodology

A total of 26 soil samples were collected from either an excavation, pothole, or soil boring installed using a rotary rig equipped with a hollow stem auger and split spoon barrel. Excavations and potholes did not extend below 3 ft bgs. Soil borings were advanced to depths ranging from 12 ft to 15 ft bgs. Prior to soil boring installation, clearance requests were submitted to New Mexico 811 (i.e., One Call).

During boring installation, soil samples were continuously logged for morphological characteristics and field screened for volatile organic compounds (VOCs) using a photoionization detector (PID).

At least two intervals were selected from each boring for laboratory analysis. The selected samples included the depth interval exhibiting the highest PID reading, groundwater interface and/or boring terminus. Sample locations from the initial assessment are presented in Figure 4; soil borings installed during the site characterization are shown in Figure 5.

Soil samples were placed directly into laboratory provided sample containers, labeled, stored on ice, and transported under proper chain-of-custody protocol to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for chemical analysis. Selected soil samples were analyzed for one or more of the following using the described method:

- Benzene, toluene, ethylbenzene, and xylenes (BTEX) by USEPA Method 8021B
- TPH by EPA SW-846 Method 8015M/D
- Chloride by EPA Method 300

Laboratory results, analytical methods, and chain-of-custody documents are included in Appendix B and are discussed in subsequent sections of this report.

3.3 Geotechnical Soil Sampling Methodology

Geotechnical samples were collected into a steel ring tube by driving the tube into the sample interval using a geotechnical hammer. Two soil samples were collected from one boring (i.e., MW4) from depth intervals were 5.5- 6.0 ft and 13.5-14.0 ft. The 5.5- 6.0 ft interval represent the top of the groundwater sand which appeared highly transmissive; the 13.5-14.0 ft interval represents the lower unit of that sand comprised of silty or clayey sand and appeared to be marginally transmissive.

The samples were submitted to Goemat, Inc. for the following geotechnical parameters:

- volumetric water content
- bulk density
- hydraulic conductivity

Testing results and methods are included in Appendix C and are discussed in subsequent sections of this report.

4.0 Soil Assessment and Site Characterization Findings

4.1 Introduction

A total of 26 soil samples were collected from the Site for chemical analysis. Two samples were collected for geotechnical evaluation. Analytical results from all soil assessment events are presented in the sections below.

4.2 Initial Assessment (11/29/18)

The initial assessment event was intended to characterize the presence, magnitude, and horizontal extent of potential COCs at the Site. Eleven soil samples were collected from excavation sidewalls or pothole locations (Figure 4). The depths of samples ranged from 1 ft to 3 ft bgs. Laboratory results from the initial assessment are summarized in Table 4.

Comple ID	Volatil	e Organic Co	ompounds (m	ng/kg)	Total BTEX	GRO	DRO	MRO	ТРН
Sample ID	В	т	Е	х	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
N Sidewall	< 0.016	0.031	0.061	0.37	0.462	17	< 9.8	< 49	17.0
N Sidewall 2	< 0.099	< 0.20	< 0.20	< 0.40	0	< 20	380	< 49	380.0
SW Sidewall	< 0.026	< 0.052	0.08	< 0.10	0.08	15	120	< 48	135.0
SE Sidewall	1.7	29	6.4	85	122.1	1,300	220	< 48	1,520.0
N Pothole	< 0.016	< 0.032	< 0.032	< 0.064	< 0.064	< 3.2	< 9.4	< 47	< 47
NW Pothole	< 0.018	< 0.035	< 0.035	< 0.071	< 0.071	< 3.5	< 9.3	< 49	< 49
W Pothole	< 0.094	< 0.19	2.1	17	19.1	790	210	< 49	1,000.0
W Pothole 2	< 0.02	< 0.039	< 0.039	< 0.079	< 0.079	< 3.9	< 9.6	< 48	< 48
E Pothole	< 0.014	< 0.028	< 0.028	< 0.055	< 0.055	< 2.8	< 9.8	< 49	< 49
SE Pothole	< 0.017	< 0.035	< 0.035	< 0.07	< 0.07	< 3.5	< 9.6	< 48	< 48
River Grab	< 0.017	< 0.033	< 0.033	< 0.067	< 0.067	< 3.3	< 10	< 50	< 50
Regulatory Criteria	10				50				100

Table 4.	4. Soil Analytical Results – Initial Assessment	(11/29/18)
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TPH - total petroleum hydrocarbons

BTEX - benzene, toluene, ethylbenzene, and xylenes

– exceeds regulatory criteria

GRO - gasoline range organics

DRO – diesel range organics

MRO - motor oil range organics

4.3 Soil Investigation (01/14/19 – 01/15/19)

The purpose of the soil investigation was to: 1) characterize Site soil, 2) delineate the horizontal and vertical extents of COCs in the soil, and 3) collect sufficient geotechnical data from the saturated and unsaturated zones to determine suitable remedial techniques for the Site (if required).

mg/kg – milligrams per kilogram

Fifteen soil samples were collected from 6 soil borings (Figure 5). The depths of samples ranged from 2.5 ft to 15.5 ft bgs. Groundwater was encountered between 4.0 ft and 5.0 ft bgs. Laboratory results from this assessment are summarized in Table 5.

Comula ID	Volatile Organic Compounds (mg/kg)				Total BTEX Chlor	Chloride	GRO	DRO	MRO	TPH
Sample ID	В	Т	E	Х	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
MW1 2.5-3.5'	0.96	22	7	92	121.96	< 30	1,200	600	< 49	1,800
MW1 4.5-5.5'	< 0.025	< 0.049	< 0.049	0.12	0.12	< 30	< 4.9	31	< 46	31
MW1 6.5-7.5'	< 0.023	< 0.046	< 0.046	< 0.092	< 0.0092	< 30	4.7	20	48	72.7
MW1 14-15'	< 0.025	< 0.05	< 0.05	< 0.1	< 0.1	< 30	< 5.0	< 9.3	< 47	<47
MW2 5'	< 0.024	< 0.048	< 0.048	< 0.096	< 0.096	< 30	< 4.8	< 9.2	< 46	<46
MW2 6.5-7.5'	< 0.024	< 0.048	< 0.048	< 0.096	< 0.096	< 30	< 4.8	18	< 49	18
MW3 5.0-5.5'	< 0.024	< 0.049	< 0.049	< 0.098	< 0.098	< 30	< 4.9	< 9.8	< 49	< 49
MW3 6.5-7.5'	< 0.024	< 0.049	< 0.049	< 0.097	< 0.097	< 30	< 4.9	< 9.4	< 47	< 47
MW4 5-6'	< 0.024	< 0.048	< 0.048	< 0.096	< 0.096	< 30	< 4.8	< 9.8	< 49	< 49
MW4 8-9'	< 0.024	< 0.047	< 0.047	< 0.094	< 0.094	< 30	< 4.7	130	< 50	130
MW5 4.5-5.5'	< 0.024	< 0.048	< 0.048	< 0.097	< 0.097	< 30	< 4.8	< 9.8	< 49	< 49
MW5 8-9'	< 0.024	< 0.049	< 0.049	< 0.098	< 0.098	< 30	29	86	< 47	115
MW5 14.5-15.5'	< 0.023	< 0.046	< 0.046	< 0.093	< 0.093	< 30	< 4.6	< 9.5	< 47	< 47
MW6 5.0-5.5'	< 0.025	< 0.05	< 0.05	< 0.099	< 0.099	< 30	10	10	< 49	20
MW6 7.5-8.5'	< 0.025	0.057	< 0.05	< 0.1	< 0.1	< 30	120	110	< 49	230
Regulatory Criteria	10				50	600				100

Table 5. Soil Analytical Results – Soil Investigation (01/14/19 and 01/15/19)

TPH – total petroleum hydrocarbons (TPH = GRO+DRO+MRO) BTEX – benzene, toluene, ethylbenzene, and xylenes

GRO – gasoline range organics DRO – diesel range organics

MRO – motor oil range organics

PID readings are recorded on soil boring logs, which are included in Appendix A.

4.4 Geotechnical Data

mg/kg - milligrams per kilogram

– exceeds regulatory criteria

The collected sample intervals for geotechnical analysis were tested for volumetric water content, bulk density (wet and dry), and hydraulic conductivity. The results are summarized in Table 6.

Table 6.	Results	of	Geotechnical	Testing
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Sample ID	Volumetric Water Content (%)	Bulk Density-Wet ¹ (g/cc)	Bulk Density-Dry ¹ (g/cc)	Hydraulic Conductivity (cm/sec)	
MW1 5.5-6.0'	9.4	2.09	1.92	1.0 E ⁻⁰³	
MW4 13.5-14.0'	15.3	1.91	1.65	2.4 E ⁻⁰³	

% - percent

g/cc - grams per cubic centimeter

 $\mbox{cm/sec}-\mbox{centimeters per second}$

¹Laboratory reports acknowledge a reporting bias due to insufficient sample volume and gravel inclusions in sample

4.5 Soil Investigation Summary

The soil assessments revealed that soils at the Site were comprised of interbedded sand, silt, and clay. A typical soil profile for the Site consists of clayey silty from the surface to approximately 0.5 ft, underlain by a firm clay to a depth of approximately 3.5 to 5.0 ft bgs. The clay was underlain by a medium or coarse grain groundwater sand to approximately 10 ft bgs, which was underlain by a clayey or silty groundwater sand. Groundwater was encountered across the Site between 4.0 ft and 5.0 ft bgs.

Of the 26 soil samples collected for laboratory analysis, 8 samples exceeded the regulatory criteria for TPH and 2 samples exceeded the regulatory criteria for Total BTEX. All other COCs were below NMOCD regulatory criteria.

Contaminated soil was observed in two different zones, the vadose zone (i.e., MW1 2.5-3.5') and within the saturated zone (i.e., MW4 8-9', MW5 8-9, MW6 7.5-8.5'). The nature of the constituents differs between the two zones, which implies two separate releases. The vadose zone has a high percentage of volatiles evidenced by the total BTEX and the 2:1 ratio of GRO to DRO. Impacted soil within the saturated zone exhibited no measurable quantities of total BTEX and the GRO to DRO ratios range from .038 to 1.1. Furthermore, the hydrocarbon impacted soil within the saturated zone was observed approximately 3.5 ft below the groundwater interface. This suggests that the release observed within the saturated zone occurred at a time when the aquifer reserves were much lower.

5.0 Groundwater Assessment

5.1 Introduction

Soil assessment activities indicated that the release reached the upper groundwater-bearing unit. Therefore, all six soil borings installed at the Site were converted into groundwater monitor wells (i.e., MW1 – MW6). Each monitor well was permitted by the New Mexico Office of State Engineer (Permit No.: SJ-4327 POD1-POD6). Groundwater assessment activities are documented below.

5.2 Monitoring Well Installation

MW1 was situated adjacent and downgradient from the point of release. MW2 – MW6 were installed along the perimeter of the Site for horizontal delineation. Monitor well locations are shown in Figure 6.

Groundwater sand was typically encountered between 4.0 and 5.0 ft bgs across the Site. Monitor wells were drilled to depths ranging from 12 ft bgs to 15 ft bgs. Monitoring wells were constructed inside of hollow-stem augers using 2-inch PVC. Each well was constructed with 10-ft of screened pipe at the base of the well. A sand pack consisting of 20/40 silica sand was installed to approximately 1 ft above each well screen. Bentonite seals were installed above each sand pack to ground surface. Surface completions included stick-up wells with protective casing and 2 ft x 2 ft concrete pads. Each well was fitted with 3 protective bollards.

5.3 Well Development and Groundwater Monitoring

Each well was developed using a submersible stainless-steel pump and dedicated tubing. Water was purged from each well until water clarified (approximately 10 gallons per well; greater than 3 well volumes).

Following well development, wells were sampled using EPA low-flow techniques. Five groundwater samples were collected utilizing the EPA low-flow sampling technique (i.e., MW1, MW2, MW3, MW4 and MW5). Water was produced from wells using low-density polyethylene (LDPE) tubing and a stainless-steel submersible pump. The submersible pump was set in the screened interval of each well. The depth to water was monitored as water was removed. Pump rates were adjusted to maintain a static water level and laminar flow in each well.

Purged water was piped to a flow-through cell equipped with a YSI probe to monitor water quality parameters (i.e., temperature, pH, electrical conductivity, dissolved oxygen, and oxidation-reduction potential). Water was purged until all parameters stabilized. Stabilized parameters for wells that were sampled using EPA low flow methodology are documented in attached Table D-1 (Appendix D).

One well (i.e., MW6) pumped dry during well development. This well was allowed to recharge and was sampled within 24 hours of well development and purging.

All samples were placed directly into laboratory-provided sample containers, stored on ice, and transported under proper chain-of-custody protocol to Hall Environmental Analytical Laboratory in Albuquerque, New Mexico for the following chemical analysis:

- BTEX by EPA SW-846 Method 8260
- TPH by EPA SW-846 Method 8015M/D
- Chloride by EPA Method 300.0

5.4 Groundwater Analytical Results

Groundwater analytical results for chloride and petroleum hydrocarbons are shown in Table 7. Laboratory reports containing analytical methods, results, and chain-of-custody documents are attached.

Commissio		Volat	ile Organic C	ompounds (r	ng/L)	Chloride	GRO	DRO	MRO	ТРН
Sample ID	Date	В	т	E	х	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW1	01/18/19	0.074	0.35	0.027	0.33	130	2.0	< 1.0	< 5.0	2.0
MW2	01/17/19	< 0.001	< 0.001	< 0.001	< 0.0015	150	< 0.05	< 1.0	< 5.0	< 5.0
MW3	01/17/19	< 0.001	< 0.001	< 0.001	< 0.0015	140	< 0.05	< 1.0	< 5.0	< 5.0
MW4	01/17/19	< 0.001	< 0.001	< 0.001	< 0.0015	140	< 0.05	< 1.0	< 5.0	< 5.0
MW5	01/17/19	< 0.001	< 0.001	< 0.001	< 0.0015	130	0.32	< 1.0	< 5.0	0.32
MW6	01/18/19	< 0.001	< 0.001	< 0.001	< 0.0015	180	1.1	< 1.0	< 5.0	1.1
Regulatory Criteria		0.01	0.75	0.75	0.62	250				

Table 7. Groundwater Analytical Results

TPH – total petroleum hydrocarbons (TPH=GRO+DRO+MRO) BTEX – benzene, toluene, ethylbenzene, and xylenes mg/L – milligrams per liter – exceeds regulatory criteria GRO – gasoline range organics DRO – diesel range organics MRO – motor oil range organics

Additionally, each groundwater sample was analyzed for full list of VOCs by EPA SW-846 Method 8260B; laboratory results are presented in the attached Table D-4. The monitor well located immediately adjacent to the point of release (i.e., MW1) was also analyzed for the following additional constituents:

- TDS by Standard Method 2540C
- Anions by EPA Method 300.0
- RCRA 8 Metals by EPA SW-846 Method 6010B and 7470
- SVOCs by EPA SW-846 Method 8270

Laboratory results as well as applicable standards for human health standards and/or domestic water supply are presented in the attached tables (Tables A-2 through A-5). Analytical results of the additional constituents for the MW1 sample are summarized below:

- TDS exceeded the domestic water supply criteria (Table D-2)
- Except for sulfate, all anions were below the domestic water supply criteria (Table D-2)
- All RCRA-8 metals were below human health standards (Table D-3)
- Except for benzene as noted in Table 7, all VOCs were below human health standards (Table D-4)
- All SVOC were below standards for human health, domestic water supply or laboratory detection limits (Table D-5)

5.5 Well Gauging and Survey

Each well was gauged to determine the depth to water using an oil-water interface probe capable of measuring to the nearest one-hundredth foot. No phase separated hydrocarbons (PSH) were observed. An elevation survey was conducted on the tops of monitor well casings using a survey rod and laser level transit. Depths to groundwater were subtracted from the corresponding monitor well elevation to determine the depth of groundwater above mean sea level in each well.

Using this data, Timberwolf prepared a potentiometric surface elevation (PSE) map as shown in Figure 7. The PSE map reveals the groundwater gradient to be west-southwesterly across the Site.

5.6 Findings of Groundwater Assessment

The Site is underlain by a confined, yet seasonal, groundwater aquifer. The top of the groundwater sand was encountered between 4.0 ft and 5.0 ft bgs. At the time of Timberwolf's assessment, groundwater was typically encountered a foot below the top of sand. The groundwater sand is characterized as stratified gravelly sand, with medium and coarse grain sand in the upper portion of the unit and silty and clayey sands in the lower portion of the unit. Gravel inclusions ranged in size from 0.25 to 2.0 inches in diameter and were distributed through the groundwater unit.

Benzene was the only COC identified within Site groundwater. Benzene was observed in only 1 well (i.e., MW1) situated immediately adjacent and downgradient of the point of release. Benzene was horizontally delineated. A benzene plume map is provided in Figure 7. Groundwater samples collected from MW5 and MW6 exceeded laboratory detection limits for GRO (i.e., 0.32 mg/L and 1.1 mg/L, respectively); however, neither the NMOCD nor NMDEQ has established criteria for petroleum hydrocarbons (i.e., TPH) in groundwater.

The PSE map reveals groundwater gradient is to the west-southwest, toward the La Plata River.

6.0 Stage 1 Abatement Plan

6.1 Introduction

The proposed further actions are based on the subsurface investigations conducted by Timberwolf in 2018 and 2019. The stage 1 abatement plan presented in this section is intended to assess impacted soil within the vadose and saturated zone, mitigate ecological risk to threatened and endangered species, and provide addition groundwater characterization, and to collect additional data to facilitate the select and design an effective abatement option.

6.2 Horizontal Delineation – Soil

The soil assessment revealed TPH was not horizontally delineated to the south, southwest or west relative to the point of release. Additional soil borings are required to horizontally delineate TPH in soil. Timberwolf will installation of 5 soil borings to approximately 10 ft bgs to achieve horizontal delineation of TPH in soil.

Soil borings will be installed using a hollow-stem auger. Samples will be collected continuously from the surface to the total depth of each boring. Samples will be logged for morphological characteristics, and field screened for VOCs using a PID. At least two intervals will be selected from each boring for laboratory analysis. The selected samples will include the depth interval exhibiting the highest PID reading, groundwater interface and/or boring terminus. The proposed boring locations and paths of ingress and egress are shown in Figure 9.

Selected soil samples will be placed directly into laboratory provided sample containers, labeled, stored on ice, and transported under proper chain-of-custody protocol to certified environmental laboratory for chemical analysis. Laboratory analyzes to include one or more of the following using the described method:

- Benzene, toluene, ethylbenzene, and xylenes (BTEX) by USEPA Method 8021B
- TPH by EPA SW-846 Method 8015M/D

Additionally, one soil boring will be deepened to determine the base of the aquifer base. This data will be used to calculate the aquifer storage coefficient.

6.3 Vadose Zone Assessment and Abatement

The soil assessments revealed soil within and adjacent to the former tank battery with elevated Total BTEX and TPH. Further evaluation of impacted soil from the vadose zone (i.e., unsaturated zone) is required to determine if constituents are capable of migrating to the underlying groundwater (as required under NMAC 20.6.2§4103).

The following plan is presented to assess and mitigate soil in the vadose zone:

- 1. Delineate the horizontal extent of impacted soil within the vadose zone
- 2. Determine the leachability of impacted soil by analyzing select soil samples, including samples exhibiting the highest concentrations of TPH, for synthetic precipitation leaching procedure (SPLP) by EPA SW-846 Method 1312
- 3. Mitigate risk to groundwater by excavating soil that has the potential to leach constituents with concentrations that exceed groundwater criteria
- 4. Transport and dispose of excavated soil at a permitted commercial disposal facility
- 5. Backfill the excavation with clean fill

The proposed leachate study area is presented in Figure 10.

6.4 Ecological Risk Assessment

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

To ensure preservation of the area ecology, Timberwolf will review toxicological databases to determine the protective concentrations limits for COCs for the Southwestern willow flycatcher. An ecological assessment of soil adjacent to the excavation will include conducted to determine if soil within the upper 2 ft of the soil horizon pose a risk to the Southwestern willow flycatcher. Any soil exceeding the protective concentration limit for COCs will be excavated and removed to mitigate risk to the Southwestern willow flycatcher. Following excavation activities, the excavation will be backfilled.

6.5 Additional Groundwater Assessment

The groundwater assessment revealed that TDS concentrations in the groundwater sample collected from MW1 exceeded the established human health standard. Additional groundwater assessment is required to determine if the elevated TDS is a result of the release or if it is a native condition of Site groundwater.

Timberwolf will collect a groundwater sample from an upgradient monitor well (i.e., MW3) for laboratory analysis of the following constituents:

- TDS
- conductivity
- cations (calcium, magnesium, sodium, and potassium)
- anions (i.e., chloride, sulfate, carbonate, and bicarbonate)

If the constituents in the upgradient groundwater sample are consistent with the analytical results of the groundwater sample collected from MW1, then the elevated TDS will have been proven to be a native condition of Site groundwater and no additional assessment will be

conducted. Otherwise, all perimeter monitoring wells will be sampled and analyzed for the aforementioned constituents to delineate the TDS at the Site.

6.6 Receptor Survey

Conduct a receptor survey to identify all water wells within a one-mile radius of the Site and sensitive features within a one-quarter mile radius of the Site.

6.7 Hydrogeologic Assessment of Groundwater and the La Plata River

Upon approval, Timberwolf will install at least one temporary observation point along the La Plata River. The observation point(s) will consist of a five-eighths steel rod driven into the riverbank until refusal. The top of each rod will be surveyed for elevation.

The observation point(s) will be used measure river levels. Surface water levels will be compared to potentiometric measurements in monitor wells to determine the relationship between surface water and groundwater.

6.8 Quality Assurance Plan

Sampling and analytical techniques will conform with the following:

- *Standard Methods for the Examination of Water and Wastewater,* American Public Health Association
- *Methods for Chemical Analysis of Water and Waste,* Analytical Quality Laboratory, USEPA
- Techniques of Water Resource Investigation of the U.S. Geological Survey
- Test Methods for Evaluating Solid Waste, USEPA
- *Annual Book of ASTM Standards. Part31. Water*, American Society for Testing and Materials
- *National Handbook of Recommended Methods for Water-Data Acquisition*, U.S. Geological Survey

6.9 Monitoring Program

Site groundwater will be monitored quarterly to evaluate plume stability. Sampling stations included in the monitoring program are MW1 through MW6 as shown in Figure 6. During each monitoring event, groundwater will be analyzed for BTEX, the depth to water in each well will be gauged, surface water levels in the La Plata River will be gauged to evaluate the relationship between groundwater and surface water, and a PSE map will be prepared to monitor the direction of groundwater flow.

Additionally, monitoring activity of any in situ treatment system will be recorded. Quarterly monitoring reports documenting Site monitoring activities and analytical results will be prepared and submitted to division.

Site abatement will be considered complete once 8 consecutive quarterly monitoring events indicate a stable groundwater plume and samples from all monitor wells during that period do not exceed the remedial target (established in stage 2 abatement plan). After the abatement is complete, the monitoring program will terminate and monitor well will be plugged and abandoned.

6.10 Proposed Schedule of Stage 1 Abatement Activities

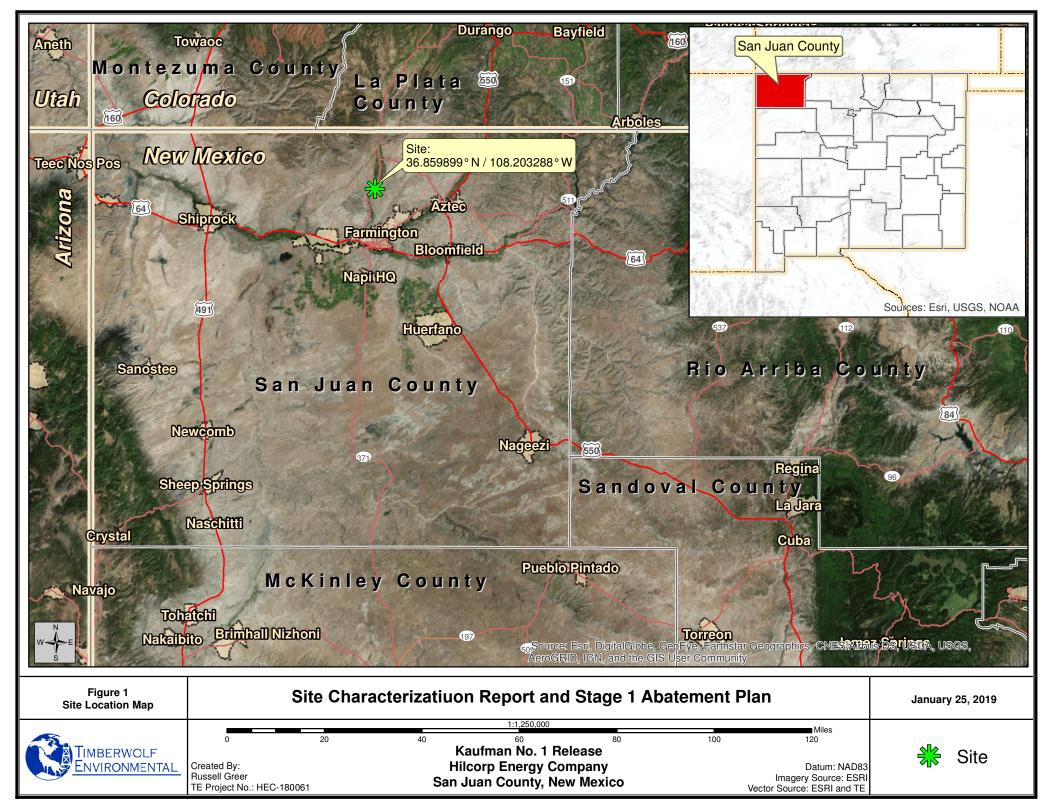
Upon completion of the stage 1 abatement activities, a stage 2 abatement plan will be prepared submitted to the director. The proposed schedule of stage 1 abatement activities is presented in Table 9 below.

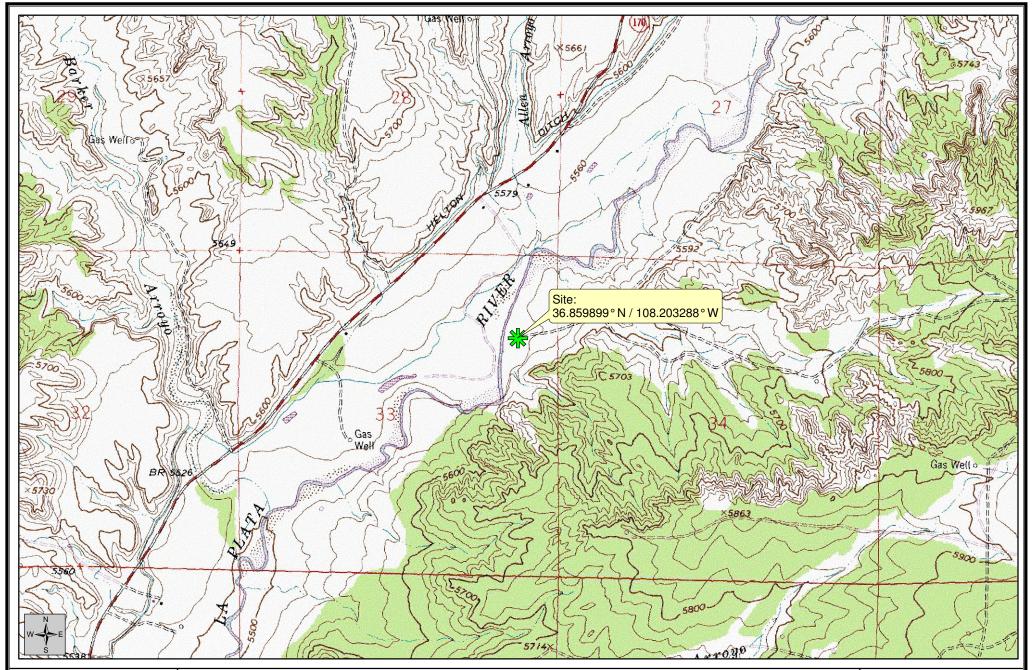
Stage 1 Abatement Task	June	July	Aug	September
Horizontal Delineation of Soil	_	+		
Vadose Zone Assessment and Abatement				
Ecological Risk Assessment				
Additional Groundwater Assessment		-		
Receptor Survey		-		
Hydrogeologic Assessment*				
Stage 2 Abatement Plan Submission				-

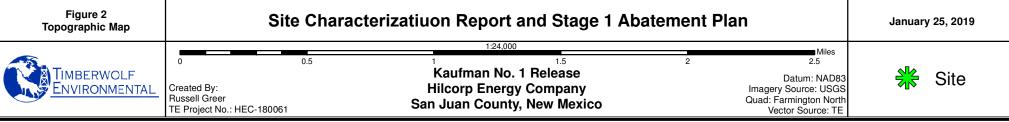
Table 9. Proposed Schedule of Stage 1 Abatement Activities

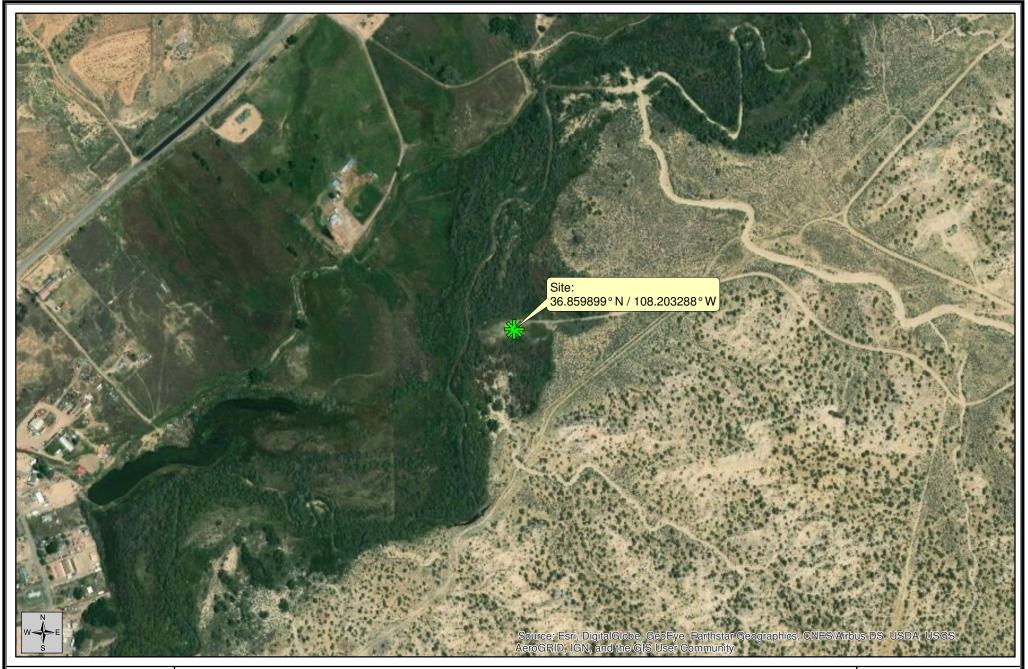
*Contingent upon division approval

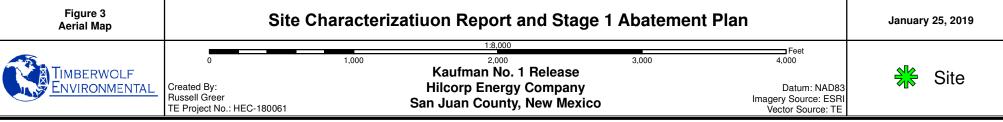
Figures





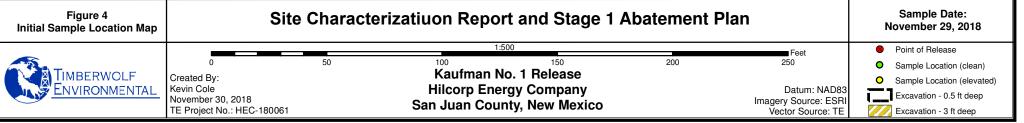






Comula ID	Volatil	e Organgic C	compounds (r	ng/kg)	Total BTEX	GRO	DRO	MRO	Total TPH
Sample ID	В	Т	E	Х	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
N Sidewall	< 0.016	0.031	0.061	0.37	0.462	17	< 9.8	< 49	17.0
N Sidewall 2	< 0.099	< 0.20	< 0.20	< 0.40	0	< 20	380	< 49	380.0
SW Sidewall	< 0.026	< 0.052	0.08	< 0.10	0.08	15	120	< 48	135.0
SE Sidewall	1.7	29	6.4	85	122.1	1,300	220	< 48	1,520.0
N Pothole	< 0.016	< 0.032	< 0.032	< 0.064	< 0.064	< 3.2	< 9.4	< 47	< 47
NW Pothole	< 0.018	< 0.035	< 0.035	< 0.071	< 0.071	< 3.5	< 9.3	< 49	< 49
W Pothole	< 0.094	< 0.19	2.1	17	19.1	790	210	< 49	1,000.0
W Pothole 2	< 0.02	< 0.039	< 0.039	< 0.079	< 0.079	< 3.9	< 9.6	< 48	< 48
E Pothole	< 0.014	< 0.028	< 0.028	< 0.055	< 0.055	< 2.8	< 9.8	< 49	< 49
SE Pothole	< 0.017	< 0.035	< 0.035	< 0.07	< 0.07	< 3.5	< 9.6	< 48	< 48
River Grab	< 0.017	< 0.033	< 0.033	< 0.067	< 0.067	< 3.3	< 10	< 50	< 50
Regulatory Criteria	10		-		50		-		100
The second					0.04	Chairson of			

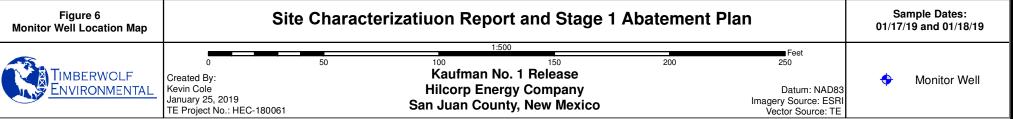


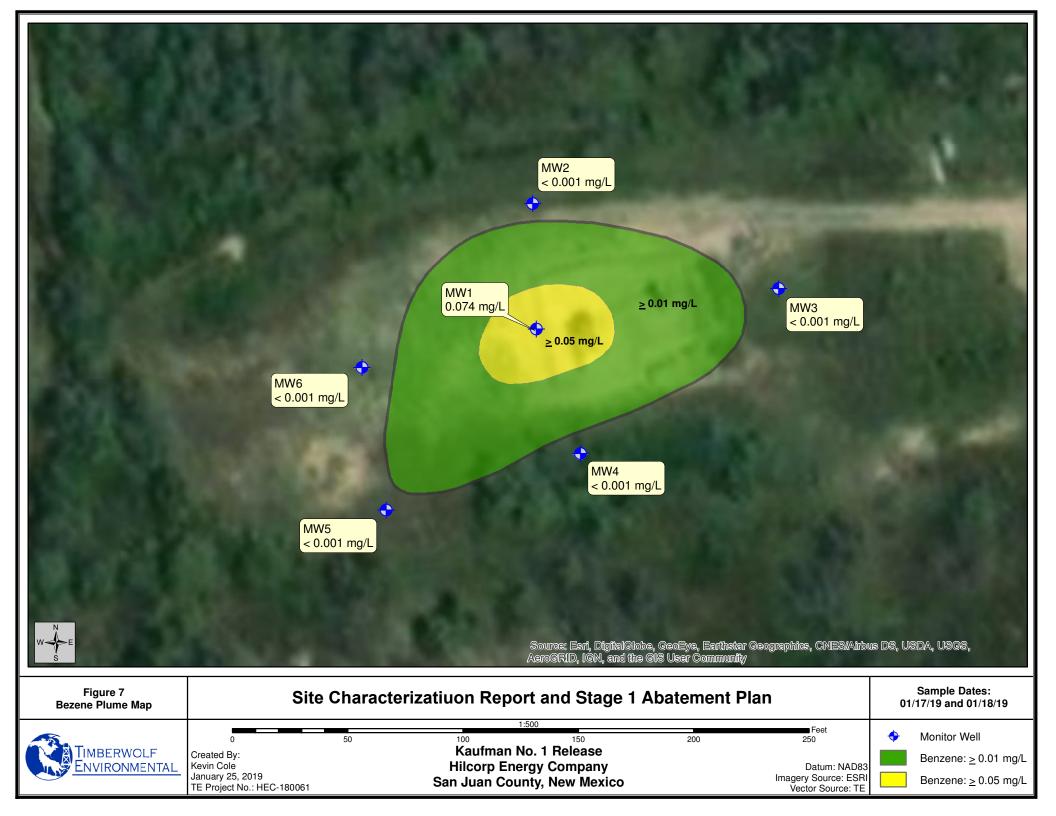


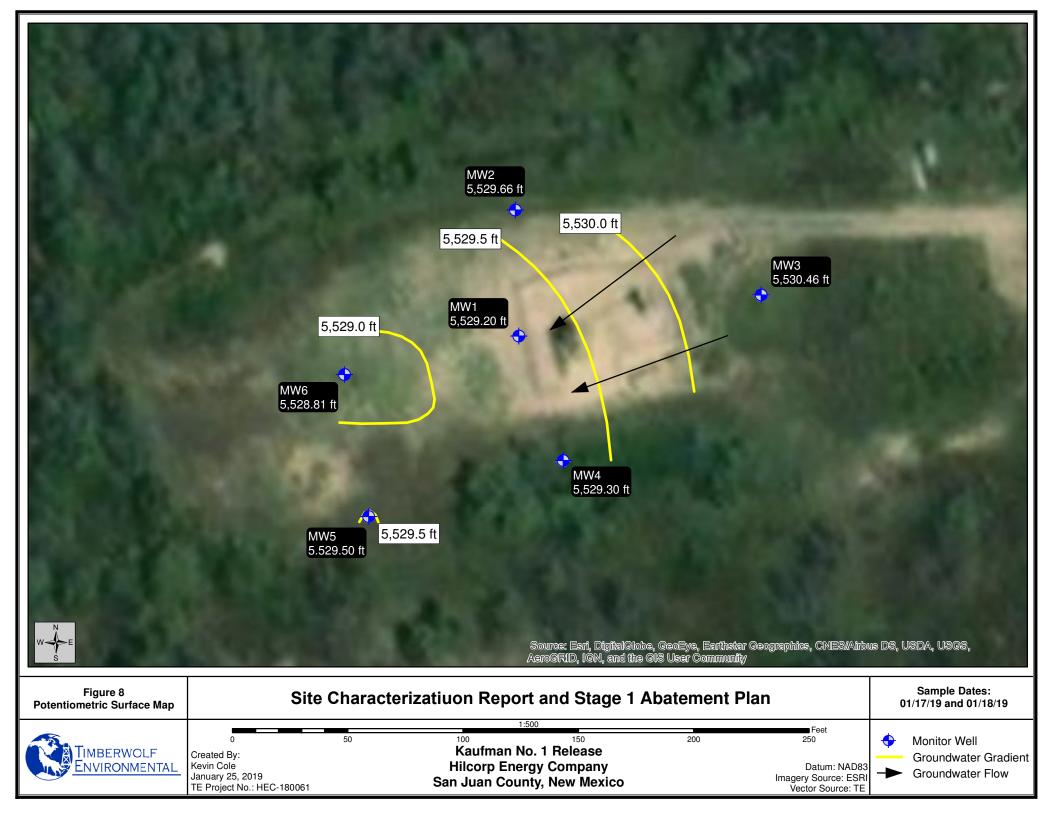
Ocean In ID	Dette	Vo	latile Orgnic	Compounds (mg/	kg)	Total BTEX	Chloride	TPH-DRO	TPH-MRO	TPH-GRO	Total TPH	PH Control of the second se
Sample ID	Date	Benzene	Toluene	Ethylbenzene	Xylenes	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
MW1 2.5-3.5'	01/15/19	0.96	22	7	92	121.96	< 30	600	< 49	1,200	1,800	
MW1 4.5-5.5'	01/15/19	< 0.025	< 0.049	< 0.049	0.12	0.12	< 30	31	< 46	< 4.9	31	
MW1 6.5-7.5'	01/15/19	< 0.023	< 0.046	< 0.046	< 0.092	< 0.0092	< 30	20	48	4.7	72.7	AND ALL ADDR. ADDR
MW1 14-15'	01/15/19	< 0.025	< 0.05	< 0.05	< 0.1	< 0.1	< 30	< 9.3	< 47	< 5.0	<47	
MW2 5'	01/14/19	< 0.024	< 0.048	< 0.048	< 0.096	< 0.096	< 30	< 9.2	< 46	< 4.8	<46	
MW2 6.5-7.5'	01/14/19	< 0.024	< 0.048	< 0.048	< 0.096	< 0.096	< 30	18	< 49	< 4.8	18	
MW3 5.0-5.5'	01/14/19	< 0.024	< 0.049	< 0.049	< 0.098	< 0.098	< 30	< 9.8	< 49	< 4.9	< 49	
MW3 6.5-7.5'	01/14/19	< 0.024	< 0.049	< 0.049	< 0.097	< 0.097	< 30	< 9.4	< 47	< 4.9	< 47	
MW4 5-6'	01/15/19	< 0.024	< 0.048	< 0.048	< 0.096	< 0.096	< 30	< 9.8	< 49	< 4.8	< 49	
MW4 8-9'	01/15/19	< 0.024	< 0.047	< 0.047	< 0.094	< 0.094	< 30	130	< 50	< 4.7	130	
MW5 4.5-5.5'	01/15/19	< 0.024	< 0.048	< 0.048	< 0.097	< 0.097	< 30	< 9.8	< 49	< 4.8	< 49	
MW5 8-9'	01/15/19	< 0.024	< 0.049	< 0.049	< 0.098	< 0.098	< 30	86	< 47	29	115	
MW5 14.5-15.5	01/15/19	< 0.023	< 0.046	< 0.046	< 0.093	< 0.093	< 30	< 9.5	< 47	< 4.6	< 47	
MW6 5.0-5.5'	01/14/19	< 0.025	< 0.05	< 0.05	< 0.099	< 0.099	< 30	10	< 49	10	20	and the second s
MW6 7.5-8.5' Regulatory C	01/14/19	< 0.025	0.057	< 0.05	< 0.1	< 0.1	< 30	110	< 49	120	230 100	CONTRACTOR OF THE OWNER OWNER OF THE OWNER OWNE
negulatory C	mena	10				50	600				100	MW3
W S									Sou	1W5 1rce: Esri, 1 Scrid, IG	Digital@lot N, and the	TWT TWV4
Figu Site Charac Sample Loo	orization			Si	te Cha	aracte	rizatiu	on Re	port a	ind St	age 1	Sample Dates: 01/14/19 and 01/15/19
	ERWOLI RONMEN	ITAL Ke	0 reated By: evin Cole nuary 25, 2 E Project No	019 5.: HEC-180061	50		H	¹⁰⁰ Kaufma Hilcorp I n Juan C	Energy	Compai	ny	200Feet 250Point of ReleaseDatum: NAD83 Imagery Source: ESRI Vector Source: TESoil Sample (Clean)

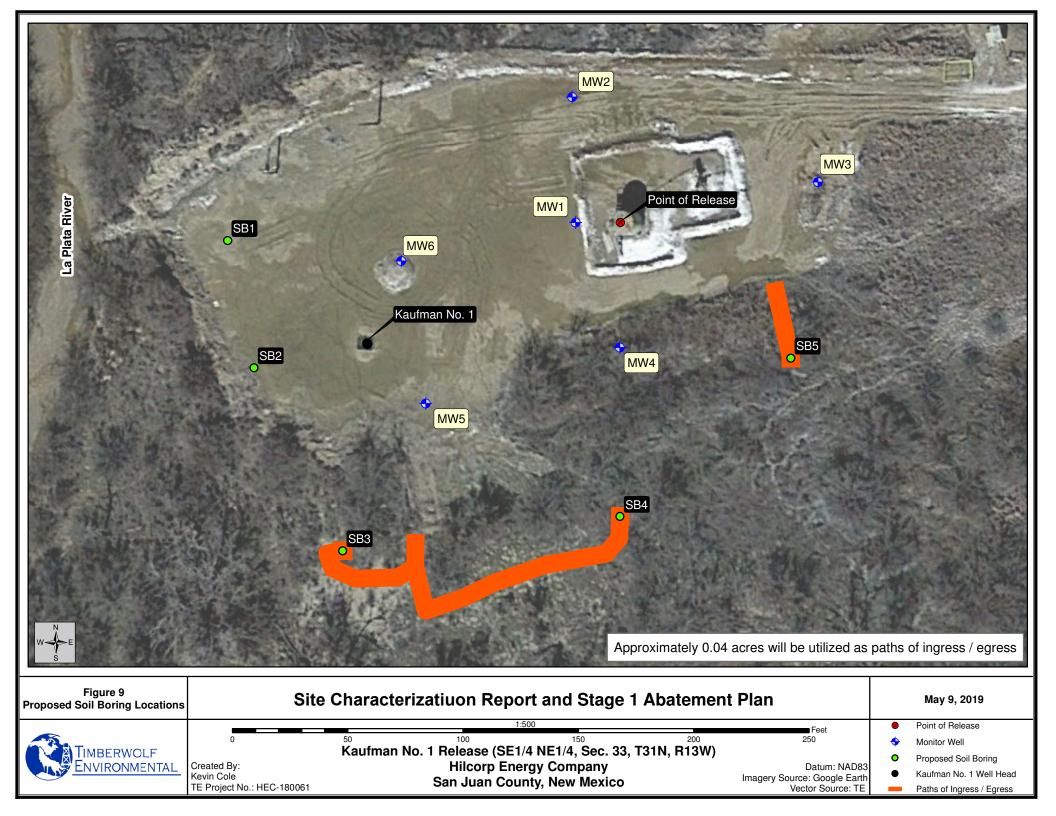
Sample ID	Date	Vo	latile Organio	c Compounds (m	g/L)	Chloride	TPH-GRO	TPH-DRO	TPH-MRO	Total TPH
Sample ID	Date	В	Т	E	Х	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW 1	01/18/19	0.074	0.35	0.027	0.33	130	2.0	< 1.0	< 5.0	2.0
MW2	01/17/19	< 0.001	< 0.001	< 0.001	< 0.0015	150	< 0.05	< 1.0	< 5.0	< 5.0
MW3	01/17/19	< 0.001	< 0.001	< 0.001	< 0.0015	140	< 0.05	< 1.0	< 5.0	< 5.0
MW4	01/17/19	< 0.001	< 0.001	< 0.001	< 0.0015	140	< 0.05	< 1.0	< 5.0	< 5.0
MW5	01/17/19	< 0.001	< 0.001	< 0.001	< 0.0015	130	0.32	< 1.0	< 5.0	0.32
MW6	01/18/19	< 0.001	< 0.001	< 0.001	< 0.0015	180	1.1	< 1.0	< 5.0	1.1
Regulatory Criteria		0.01	0.75	0.75	0.62	250				

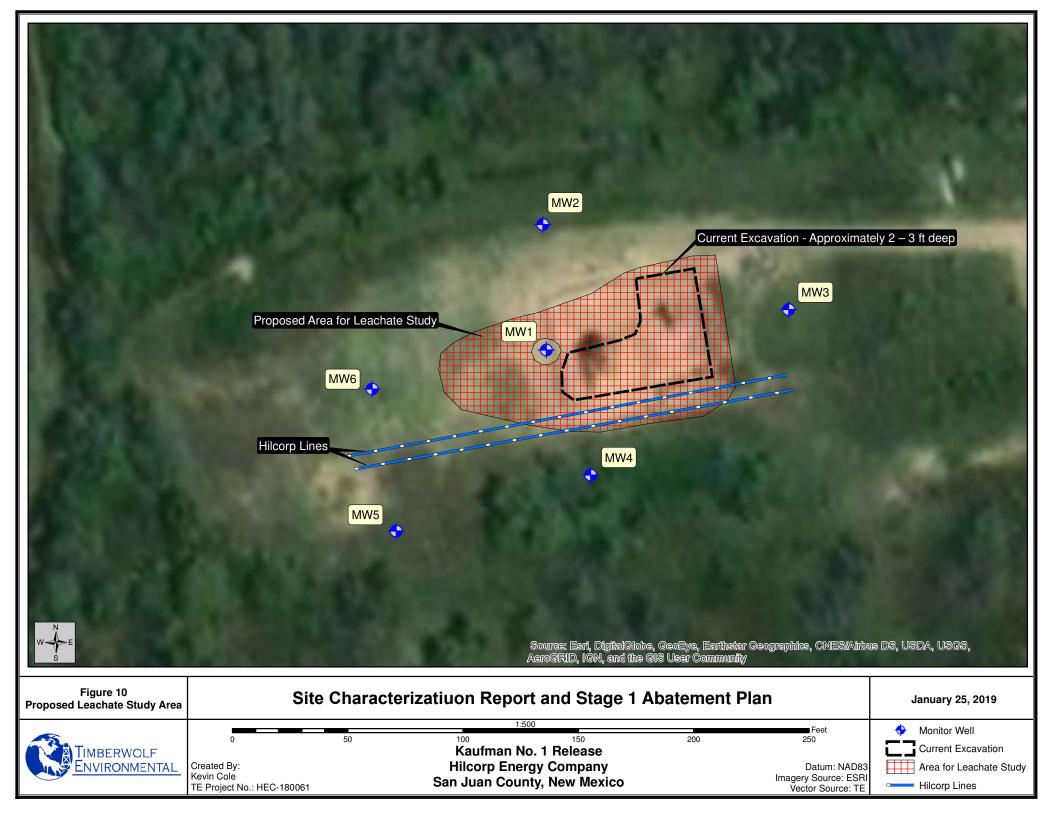












Appendix A Soil Boring Logs

MONITORING WELL INSTALLATION REPORT

Page 1 of 1



MW-1

Client: Hi	lcorp Energ	y Company	/		Completion Date: 01/15/19				
Project Na	ame: Kaufr	nan No. 1			Logged By: Jim Foster				
Site Locat	ion: Farmi	ngton, New	Mexico		Drilled By: Geomat, Inc.				
Project Nu	umber: 180	061			Drilling Method & Boring Diameter:	Hollow Stem Aug	ger 5.5'		
-	ordinates:		-108.20337	7	Total Depth (ft): 15'				
-	urface Elev				First Water Encountered (ft): 5'				
					()				
Depth (feet)	nscs	PID Reading (ppm)	Soil Sample						
De (fe	SN	PID Rea (ppn	So Sa	Free sector de contrad	Soil Description		Well Completion		
E -	-			Excavated, void					
F -	СН			FIRM CLAY					
E _		589			MEDIUM SAND				
F -	SC	sw		CLAYEY SAND					
E =	<u>CL</u>			SANDY CLAY CLAYEY SAND					
┣ -	SC SW	371		QUARTZ SAND, brown; groundwa	ator				
5				QUARTZ SAND, grey					
┣ -	4								
L _	SW								
┣- –	-	86.4							
				QUARTZ SAND, brown					
┣- –	-								
	1								
	-								
	sw								
┣ –	-								
	1								
┣ -	-								
	1	050							
<u> </u>		258							
	1								
┣ -	-								
F -	1			TD = 15'					
┣ -	-								
F -	1								
—	-								
_ 20 _	1								
┣ -	-								
	1								
┣ –	-								
┣ -	4								
<u> </u>	1								
<u>Notes</u> : Well Com	pletion: Wa	ell Screen	4-14 ft has	. Sand packed to 3 ft bgs, sealed t	to surface with bentonite Well	 groundwater sand pack 			
				etion is stick up.		- screened interva	al		
			-			- bentonite seal			

Page 1 of 1



Μ	W	-2
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Client: Hild	corp Energ	y Company	·		Completion Date: 01/14/19				
Project Nar	me: Kaufn	nan No. 1			Logged By: Jim Foster				
Site Location	on: Farmir	ngton, New	Mexico		Drilled By: Geomat, Inc.				
Project Nur	mber: 180	061			Drilling Method & Boring Diameter: Hollow Stem Auger 5.5"				
Boring Coo	ordinates:	36.86007, -	108.2034		Total Depth (ft): 13'				
Ground Su	rface Eleva	ation (ft, ms	sl): 5,536f	t	First Water Encountered (ft): 4.33'				
		bu	e						
Depth (feet)	sosn	PID Reading (ppm)	Soil Sample						
(fe	 ML	PII Re (PI	So Sa		Soil Description		Well Completion		
	CH			CLAYEY SILT FIRM CLAY, brown					
\Box				CLAY, brown					
	СН								
\Box \Box									
	SW	0.35		COARSE SAND, brown					
	СН			CLAY, highly plastic					
— 5 —	SW	0.4		MEDIUM SAND, groundwater QUARTZ SAND, pea gravel and 1	5" gravel inclusions				
				QUARTZ SAND, pea graver and T					
\square									
	SW			hydrocarbon staining 6-8'					
\Box									
		0.8							
	SM			CLAYEY SILTY FINE SAND					
— 10 —				NO RETURN					
\square									
— 15 —									
				TD = 13'					
\square									
_ 20 _									
-									
Notes:						- groundwater			
Well Comp				. Sand packed to 1 ft bgs, sealed t	o surface with bentonite. Well	- sand pack			
completed	with 2-inch	PVC, surf	ace compl	etion is stick up.		- screened interva	al		
						 bentonite seal 			

Page 1 of 1



MW-3

Client: Hil	corp Energ	y Company	/		Completion Date: 01/14/19			
Project Na	me: Kaufn	nan No. 1			Logged By: Jim Foster			
Site Locati	ion: Farmir	ngton, New	Mexico		Drilled By: Geomat, Inc.			
Project Nu	mber: 180	061			Drilling Method & Boring Diameter: Hollow Stem Auger 5.5"			
Boring Coordinates: 36.85995, -108.20309			Total Depth (ft): 13'					
Ground Su	urface Eleva	ation (ft, m	sl): 5,536f	t	First Water Encountered (ft): 4.33'			
		bu	٩					
Depth (feet)	nscs	PID Reading (ppm)	Soil Sample					
۵ بق	ML S	<u> </u>	ы Х Х	CLAYEY SILT	Soil Description		Well Completion	
				SILTY CLAY				
二								
	CL							
	1							
	СН			CLAY, firm brown				
		0.45						
— 5 —	CL	0.45 0.5		SANDY CLAY QUARTZ SAND, pea gravel and 1	5" gravel inclusions			
		0.0		- groundwater	.o graver metasions			
	sw	0.55						
	500							
	-			- sandstone				
— 10 —				NO RETURN				
				NORETORN				
\square								
	-							
	1							
\square								
— 15 —	-							
				TD = 14'				
	-							
\square								
	-							
	1							
<u> </u>	-							
	-							
	4							
	1							
	4							
Notes:	1					- groundwater		
Well Comp				. Sand packed to 3 ft bgs, sealed t	o surface with bentonite. Well	 sand pack 		
completed	with 2-inch	n PVC, surf	ace compl	etion is stick up.		- screened interva	al	
						 bentonite seal 		

Page 1 of 1



MW-4

Client: Hild	corp Energ	y Company	/		Completion Date: 01/15/19				
Project Na	me: Kaufr	nan No. 1			Logged By: Jim Foster				
Site Locati	on: Farmi	ngton, New	Mexico		Drilled By: Geomat, Inc.				
Project Nu	mber: 180	061			Drilling Method & Boring Diameter: Hollow Stem Auger 5.5"				
Boring Cod	ordinates:	36.85973, ·	108.2033	3	Total Depth (ft): 14'				
Ground Su	Irface Elev	ation (ft, m	sl): 5,539f	t	First Water Encountered (ft): 5				
_		ing	e						
Depth (feet)	nscs	PID Reading (ppm)	Soil Sample		Soil Description		Well Completion		
L _	СН	ML		FIRM CLAY, brown	CLAYEY SILT				
F	SC			CLAYEY SANDY SILT					
				FIRM CLAY, brown					
	СН				MEDIUM SAND				
\square	CL	SW		SILTY CLAY					
_ 5 _	CL			SANDY SILTY CLAY					
_ [°] _	-	340		QUARTZ SAND, pea gravel and	1.5" gravel inclusions				
	1								
	SW								
F =	300								
		249		- possible hydrocarbon staining					
	-								
10				NO RETURN					
	1								
F =									
	-								
\square	1								
<u> </u>									
L _				TD = 14'					
	-								
F =	1								
_ 20 _	-								
\square									
	1								
	1								
\vdash $-$									
				. Sand packed to 3 ft bgs, sealed	d to surface with bentonite. Well	 groundwater sand pack 			
completed	wiun ∠-INCI	r PVC, Suff	ace compl	etion is stick up.		 screened interv bentonite seal 	aı		

MW-5

Page 1 of 1



Client: Hild	corp Energ	y Company	/		Completion Date: 01/15/18				
Project Nar	me: Kaufn	nan No. 1			Logged By: Jim Foster				
Site Locatio	on: Farmir	ngton, New	Mexico		Drilled By: Geomat, Inc.				
Project Nur	mber: 180	061			Drilling Method & Boring Diameter: Hollow Stem Auger 5.5"				
Boring Coo	ordinates:	36.85966, -	108.20358	, ·	Total Depth (ft): 15'				
Ground Su					First Water Encountered (ft): 4.5'				
		-							
Depth (feet)	nscs	PID Reading (ppm)	Soil Sample		Soil Description		Well Completion		
			S S	FIRM CLAY, brown with calcarious i	-				
	СН	SC		FIRM CLAT, DIOWN WITH CAICANOUS	CLAYEY S	AND			
	SW			MEDIUM SAND, brown					
	SC			CLAYEY SAND					
	SW			MEDIUM SAND, brown					
	CL			SANDY CLAY					
— 5 —	SW			MEDIUM SAND, groundwater QUARTZ SAND, saturated with 1.5'	" aravel inclusion				
	SW	363		Saturated with 1.5	ฐเฉข ะ แน่งเของก				
				MEDIUM SAND, with 1.5" gravel inc	clusions				
	SW	16.3							
		10.5		 hydrocarbon stainig 					
_ 10 _		342			eb e e e e e e e				
	SC	342		CLAYEY QUARTZ SAND, hydrocar	rbon odor				
	SC	CL		CLAYEY QUARTZ SAND	SANDY C	I AY			
				SILTY CLAY					
	CL			SILTI CLAT					
	СН			CLAY, highly plastic					
— 15 —	SC	8.05		CLAYEY SAND					
				TD = 15'					
				TD = 15					
Notes:						- aroundwator			
Notes: Well Completion: Well Screen: 4-14 ft bgs. Sand packed to 3 ft bgs, sealed to surface with bentonite. Well - sand pack completed with 2-inch PVC, surface completion is stick up screened interval									
						 bentonite seal 			

Page 1 of 1



MW-6

Client: Hild	corp Energ	y Company	/		Completion Date: 01/14/19			
Project Na	me: Kaufn	nan No. 1			Logged By: Jim Foster			
Site Locati	on: Farmir	ngton, New	Mexico		Drilled By: Geomat, Inc.			
Project Nu	mber: 180	061			Drilling Method & Boring Diameter: Hollow Stem Auger			
Boring Coc	ordinates:	36.85984, -	108.2036	6	Total Depth (ft): 13'			
Ground Su	rface Eleva	ation (ft, ms	sl): 5,536f	t	First Water Encountered (ft): 4.5'			
-		bu	e					
Depth (feet)	sosn	PID Reading (ppm)	Soil Sample		Call Description		Well Completion	
<u> </u>) ML	<u> </u>	Ϋ́ Ϋ́	CLAYEY SILT	Soil Description		Well Completion	
\square	СН	3.15		FIRM CLAY, brown				
	\mathbf{k}	СН		FIRM CLAY, brown				
\square	СН				SILT	CLAY STONE		
	СП	ML						
	ML	2.1		CLAYEY SILT, groundwater				
<u> </u>		۲.۱		NO RETURN				
_				QUARTZ SAND, pea gravel and 1	-2" gravel inclusions			
	SW							
		9.7						
		183		MEDIUM SAND				
	SP							
	-			- 1-2" gravel inclusions				
<u> </u>				NO RETURN				
 15								
<u> </u>								
				TD = 13'				
20								
\vdash –								
\square								
Notes:						- groundwater		
Well Comp				. Sand packed to 1 ft bgs, sealed t	to surface with bentonite. Well	- sand pack		
completed	with 2-inch	PVC, surf	ace compl	etion is stick up.		 screened interv bontonito cool 	al	
						 bentonite seal 		

Appendix B Laboratory Reports and Chain-of-Custody Documents

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Kaufman No 1

Client Sample ID: N. Sidewall Collection Date: 11/29/2018 9:25:00 AM

Lab ID: 1811E73-001

Project:

Matrix: MEOH (SOIL) Received Date: 11/30/2018 8:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/30/2018 11:25:53 AM	1 41813
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/30/2018 11:25:53 AM	1 41813
Surr: DNOP	97.8	50.6-138		%Rec	1	11/30/2018 11:25:53 AM	1 41813
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	17	3.1		mg/Kg	1	11/30/2018 9:58:17 AM	R55986
Surr: BFB	284	73.8-119	S	%Rec	1	11/30/2018 9:58:17 AM	R55986
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.016		mg/Kg	1	11/30/2018 9:58:17 AM	R55986
Toluene	0.031	0.031		mg/Kg	1	11/30/2018 9:58:17 AM	R55986
Ethylbenzene	0.061	0.031		mg/Kg	1	11/30/2018 9:58:17 AM	R55986
Xylenes, Total	0.37	0.063		mg/Kg	1	11/30/2018 9:58:17 AM	R55986
Surr: 4-Bromofluorobenzene	91.7	80-120		%Rec	1	11/30/2018 9:58:17 AM	R55986

Qualifiers:	* D	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix	$\begin{bmatrix} A^{B}_{E} \end{bmatrix}$	Analyte detected in the associated Method Blank
	_		I II	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at t

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Kaufman No 1

Client Sample ID: N. Sidewall 2 Collection Date: 11/29/2018 9:30:00 AM

Lab ID: 1811E73-002

Project:

Matrix: MEOH (SOIL) Received Date: 11/30/2018 8:25:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analy	st: Irm
Diesel Range Organics (DRO)	380	9.8	mg/Kg	1	11/30/2018 11:48:03 A	M 41813
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	11/30/2018 11:48:03 A	M 41813
Surr: DNOP	102	50.6-138	%Rec	1	11/30/2018 11:48:03 A	M 41813
EPA METHOD 8015D: GASOLINE RANGE					Analy	st: NSB
Gasoline Range Organics (GRO)	ND	20	mg/Kg	5	11/30/2018 10:21:03 A	M R55986
Surr: BFB	117	73.8-119	%Rec	5	11/30/2018 10:21:03 A	M R55986
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.099	mg/Kg	5	11/30/2018 10:21:03 A	M R55986
Toluene	ND	0.20	mg/Kg	5	11/30/2018 10:21:03 A	M R55986
Ethylbenzene	ND	0.20	mg/Kg	5	11/30/2018 10:21:03 A	M R55986
Xylenes, Total	ND	0.40	mg/Kg	5	11/30/2018 10:21:03 A	M R55986
Surr: 4-Bromofluorobenzene	85.0	80-120	%Rec	5	11/30/2018 10:21:03 A	M R55986

Qualifiers:	* D	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix	NA	Analyte detected in the associated Method Blank Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at t

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Kaufman No 1

Client Sample ID: SE Sidewall Collection Date: 11/29/2018 9:35:00 AM

Lab ID: 1811E73-003

Project:

Matrix: MEOH (SOIL) Received Date: 11/30/2018 8:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	: Irm
Diesel Range Organics (DRO)	220	9.7		mg/Kg	1	11/30/2018 12:10:08 PM	41813
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/30/2018 12:10:08 PM	41813
Surr: DNOP	100	50.6-138		%Rec	1	11/30/2018 12:10:08 PM	41813
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	1300	180		mg/Kg	50	11/30/2018 10:43:42 AM	R55986
Surr: BFB	192	73.8-119	S	%Rec	50	11/30/2018 10:43:42 AM	R55986
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	1.7	0.88		mg/Kg	50	11/30/2018 10:43:42 AM	R55986
Toluene	29	1.8		mg/Kg	50	11/30/2018 10:43:42 AM	R55986
Ethylbenzene	6.4	1.8		mg/Kg	50	11/30/2018 10:43:42 AM	R55986
Xylenes, Total	85	3.5		mg/Kg	50	11/30/2018 10:43:42 AM	R55986
Surr: 4-Bromofluorobenzene	93.7	80-120		%Rec	50	11/30/2018 10:43:42 AM	R55986

Qualifiers:	* D	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix		Analyte detected in the associated Method Blank Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at t

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Kaufman No 1

Client Sample ID: SE Pothole Collection Date: 11/29/2018 9:38:00 AM

Lab ID: 1811E73-004

Project:

Received Date: 11/30/2018 8:25:00 AM

Matrix: MEOH (SOIL)

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analys	st: Irm
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	11/30/2018 12:32:20 P	M 41813
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/30/2018 12:32:20 P	M 41813
Surr: DNOP	94.4	50.6-138	%Rec	1	11/30/2018 12:32:20 P	M 41813
EPA METHOD 8015D: GASOLINE RANGE					Analys	st: NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	11/30/2018 11:06:28 A	M R55986
Surr: BFB	91.1	73.8-119	%Rec	1	11/30/2018 11:06:28 A	M R55986
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.017	mg/Kg	1	11/30/2018 11:06:28 A	M R55986
Toluene	ND	0.035	mg/Kg	1	11/30/2018 11:06:28 A	M R55986
Ethylbenzene	ND	0.035	mg/Kg	1	11/30/2018 11:06:28 A	M R55986
Xylenes, Total	ND	0.070	mg/Kg	1	11/30/2018 11:06:28 A	M R55986
Surr: 4-Bromofluorobenzene	87.9	80-120	%Rec	1	11/30/2018 11:06:28 A	M R55986

Qualifiers:	* D	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix	$\begin{bmatrix} A^{B}_{E} \end{bmatrix}$	Analyte detected in the associated Method Blank
	_		I II	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at t

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Kaufman No 1

Client Sample ID: E Pothole Collection Date: 11/29/2018 9:46:00 AM

Lab ID: 1811E73-005

Project:

Received Date: 11/30/2018 8:25:00 AM

Matrix: MEOH (SOIL)

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: Irm
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	11/30/2018 12:54:27 PI	A 41813
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	11/30/2018 12:54:27 PM	A 41813
Surr: DNOP	94.4	50.6-138	%Rec	1	11/30/2018 12:54:27 PI	M 41813
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	2.8	mg/Kg	1	11/30/2018 11:29:07 A	N R55986
Surr: BFB	88.9	73.8-119	%Rec	1	11/30/2018 11:29:07 A	M R55986
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.014	mg/Kg	1	11/30/2018 11:29:07 A	N R55986
Toluene	ND	0.028	mg/Kg	1	11/30/2018 11:29:07 A	N R55986
Ethylbenzene	ND	0.028	mg/Kg	1	11/30/2018 11:29:07 A	A R55986
Xylenes, Total	ND	0.055	mg/Kg	1	11/30/2018 11:29:07 A	A R55986
Surr: 4-Bromofluorobenzene	84.9	80-120	%Rec	1	11/30/2018 11:29:07 A	M R55986

Qualifiers:	* D	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix	Å	Analyte detected in the associated Method Blank Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at t

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Kaufman No 1

Client Sample ID: N Pothole Collection Date: 11/29/2018 9:48:00 AM

Lab ID: 1811E73-006

Project:

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Matrix: MEOH (SOIL) Received Date: 11/30/2018 8:25:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE C	ORGANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	11/30/2018 1:16:39 PM	41813
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	11/30/2018 1:16:39 PM	41813
Surr: DNOP	96.0	50.6-138	%Rec	1	11/30/2018 1:16:39 PM	41813
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.2	mg/Kg	1	11/30/2018 11:51:59 AN	R55986
Surr: BFB	92.4	73.8-119	%Rec	1	11/30/2018 11:51:59 AN	R55986
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.016	mg/Kg	1	11/30/2018 11:51:59 AN	R55986
Toluene	ND	0.032	mg/Kg	1	11/30/2018 11:51:59 AN	R55986
Ethylbenzene	ND	0.032	mg/Kg	1	11/30/2018 11:51:59 AN	R55986
Xylenes, Total	ND	0.064	mg/Kg	1	11/30/2018 11:51:59 AN	R55986
Surr: 4-Bromofluorobenzene	89.9	80-120	%Rec	1	11/30/2018 11:51:59 AN	R55986

Qualifiers:	* D	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix	$\mathbf{A}^{\mathbf{B}}_{\mathbf{E}}$	Analyte detected in the associated Method Blank Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at t

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Kaufman No 1

Client Sample ID: NW Pothole Collection Date: 11/29/2018 9:50:00 AM

Lab ID: 1811E73-007

Project:

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Matrix: MEOH (SOIL) Received Date: 11/30/2018 8:25:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	11/30/2018 1:38:42 PM	41813
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	11/30/2018 1:38:42 PM	41813
Surr: DNOP	96.6	50.6-138	%Rec	1	11/30/2018 1:38:42 PM	41813
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	11/30/2018 12:14:48 PM	1 R55986
Surr: BFB	89.3	73.8-119	%Rec	1	11/30/2018 12:14:48 PM	1 R55986
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.018	mg/Kg	1	11/30/2018 12:14:48 PM	1 R55986
Toluene	ND	0.035	mg/Kg	1	11/30/2018 12:14:48 PM	1 R55986
Ethylbenzene	ND	0.035	mg/Kg	1	11/30/2018 12:14:48 PM	1 R55986
Xylenes, Total	ND	0.071	mg/Kg	1	11/30/2018 12:14:48 PM	1 R55986
Surr: 4-Bromofluorobenzene	85.3	80-120	%Rec	1	11/30/2018 12:14:48 PM	1 R55986

Qualifiers:	* D	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix RELIMIN		Analyte detected in the associated Method Blank Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at t

Hall Environmental Analysis Laboratory, Inc.

Date Reported:

CLIENT: Timberwolf Environmental Kaufman No 1

1811E73-008

Project:

Lab ID:

Client Sample ID: River Grab Collection Date: 11/29/2018 9:55:00 AM

Matrix: MEOH (SOIL) Received Date: 11/30/2018 8:25:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analys	:: Irm
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/30/2018 2:00:58 PM	41813
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	11/30/2018 2:00:58 PM	41813
Surr: DNOP	98.1	50.6-138	%Rec	1	11/30/2018 2:00:58 PM	41813
EPA METHOD 8015D: GASOLINE RANGE					Analys	: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	11/30/2018 10:51:42 AN	1 R55985
Surr: BFB	87.6	73.8-119	%Rec	1	11/30/2018 10:51:42 AN	1 R55985
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.017	mg/Kg	1	11/30/2018 10:51:42 AN	1 R55985
Toluene	ND	0.033	mg/Kg	1	11/30/2018 10:51:42 AN	A R55985
Ethylbenzene	ND	0.033	mg/Kg	1	11/30/2018 10:51:42 AN	1 R55985
Xylenes, Total	ND	0.067	mg/Kg	1	11/30/2018 10:51:42 AN	1 R55985
Surr: 4-Bromofluorobenzene	93.4	80-120	%Rec	1	11/30/2018 10:51:42 AN	1 R55985

Qualifiers:	* D	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix	$\mathbf{A}^{\mathbf{B}}_{\mathbf{E}}$	Analyte detected in the associated Method Blank Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at t

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Kaufman No 1

Client Sample ID: W. Pothole Collection Date: 11/29/2018 10:06:00 AM

Lab ID: 1811E73-009

Project:

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Matrix: MEOH (SOIL) Received Date: 11/30/2018 8:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	:: Irm
Diesel Range Organics (DRO)	210	9.7		mg/Kg	1	11/30/2018 2:23:12 PM	41813
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/30/2018 2:23:12 PM	41813
Surr: DNOP	108	50.6-138		%Rec	1	11/30/2018 2:23:12 PM	41813
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	790	19		mg/Kg	5	11/30/2018 11:15:22 AM	1 R55985
Surr: BFB	875	73.8-119	S	%Rec	5	11/30/2018 11:15:22 AN	1 R55985
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.094		mg/Kg	5	11/30/2018 11:15:22 AM	1 R55985
Toluene	ND	0.19		mg/Kg	5	11/30/2018 11:15:22 AM	1 R55985
Ethylbenzene	2.1	0.19		mg/Kg	5	11/30/2018 11:15:22 AN	1 R55985
Xylenes, Total	17	0.38		mg/Kg	5	11/30/2018 11:15:22 AN	1 R55985
Surr: 4-Bromofluorobenzene	133	80-120	S	%Rec	5	11/30/2018 11:15:22 AM	1 R55985

Qualifiers:	*	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix		Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix RELIVIII	NAI	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at t

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Kaufman No 1

Client Sample ID: W. Pothole 2 Collection Date: 11/29/2018 10:10:00 AM

Lab ID: 1811E73-010

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Project:

Matrix: MEOH (SOIL) Received Date: 11/30/2018 8:25:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE C	ORGANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	11/30/2018 2:45:26 PM	41813
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/30/2018 2:45:26 PM	41813
Surr: DNOP	97.0	50.6-138	%Rec	1	11/30/2018 2:45:26 PM	41813
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	11/30/2018 12:02:27 PM	1 R55985
Surr: BFB	91.4	73.8-119	%Rec	1	11/30/2018 12:02:27 PM	1 R55985
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.020	mg/Kg	1	11/30/2018 12:02:27 PM	1 R55985
Toluene	ND	0.039	mg/Kg	1	11/30/2018 12:02:27 PM	1 R55985
Ethylbenzene	ND	0.039	mg/Kg	1	11/30/2018 12:02:27 PM	1 R55985
Xylenes, Total	ND	0.079	mg/Kg	1	11/30/2018 12:02:27 PM	1 R55985
Surr: 4-Bromofluorobenzene	95.8	80-120	%Rec	1	11/30/2018 12:02:27 PM	1 R55985

Qualifiers:	* D	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix	$\mathbf{A}^{\mathbf{B}}_{\mathbf{E}}$	Analyte detected in the associated Method Blank Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at t

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental Kaufman No 1

Client Sample ID: SW Sidewall Collection Date: 11/29/2018 10:15:00 AM

Lab ID: 1811E73-011

Project:

Matrix: MEOH (SOIL) Received Date: 11/30/2018 8:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analys	t: Irm
Diesel Range Organics (DRO)	120	9.7		mg/Kg	1	11/30/2018 3:07:31 PM	41813
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/30/2018 3:07:31 PM	41813
Surr: DNOP	103	50.6-138		%Rec	1	11/30/2018 3:07:31 PM	41813
EPA METHOD 8015D: GASOLINE RANGE						Analyst	t: NSB
Gasoline Range Organics (GRO)	15	5.2		mg/Kg	1	11/30/2018 12:25:54 PN	A R55985
Surr: BFB	213	73.8-119	S	%Rec	1	11/30/2018 12:25:54 PN	A R55985
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.026		mg/Kg	1	11/30/2018 12:25:54 PN	A R55985
Toluene	ND	0.052		mg/Kg	1	11/30/2018 12:25:54 PN	/ R55985
Ethylbenzene	0.080	0.052		mg/Kg	1	11/30/2018 12:25:54 PN	A R55985
Xylenes, Total	ND	0.10		mg/Kg	1	11/30/2018 12:25:54 PN	A R55985
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	11/30/2018 12:25:54 PN	A R55985

Qualifiers:	* D	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix	Å.	Analyte detected in the associated Method Blank Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at t



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

February 05, 2019

Jim Foster Timberwolf Environmental 1920 W Villa Maria Ste 205 Bryan, TX 77807 TEL: (979) 324-2139 FAX

OrderNo.: 1901785

RE: Kaufman #1

Dear Jim Foster:

Hall Environmental Analysis Laboratory received 11 sample(s) on 1/19/2019 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 <u>www.hallenvironmental.com</u> 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1901785

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 2/5/2019

CLIENT: Timberwolf Environmental Project: Kaufman #1 Lab ID: 1901785-001	Matrix: SOIL	Client Sample ID: MW-2 5' Collection Date: 1/14/2019 1:45:00 PM Matrix: SOIL Received Date: 1/19/2019 11:10:00 A								
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch				
WALKLEY BLACK TOC/FOC/OM					Analyst	: JRR				
тос	ND	0.13	% C	1	2/1/2019 9:10:00 AM	42930				
EPA METHOD 300.0: ANIONS					Analyst	: smb				
Chloride	ND	30	mg/Kg	20	1/22/2019 10:01:27 PM	42748				
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	CLP				
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	1/22/2019 12:25:59 PM	42722				
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	1/22/2019 12:25:59 PM	42722				

Surr: DNOP	100	50.6-138	%Rec	1	1/22/2019 12:25:59 PM 42722
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	1/22/2019 11:05:56 AM 42717
Surr: BFB	103	73.8-119	%Rec	1	1/22/2019 11:05:56 AM 42717
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	1/22/2019 11:05:56 AM 42717
Toluene	ND	0.048	mg/Kg	1	1/22/2019 11:05:56 AM 42717
Ethylbenzene	ND	0.048	mg/Kg	1	1/22/2019 11:05:56 AM 42717
Xylenes, Total	ND	0.096	mg/Kg	1	1/22/2019 11:05:56 AM 42717
Surr: 4-Bromofluorobenzene	104	80-120	%Rec	1	1/22/2019 11:05:56 AM 42717

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
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 16 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

1901785-002

Project:

Lab ID:

Client Sample ID: MW2 6.5-7.5' Collection Date: 1/14/2019 1:50:00 PM Received Date: 1/19/2019 11:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: smb
Chloride	ND	30		mg/Kg	20	1/22/2019 10:13:52 PM	42748
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS					Analys	t: CLP
Diesel Range Organics (DRO)	18	9.7		mg/Kg	1	1/22/2019 12:48:09 PM	42722
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/22/2019 12:48:09 PM	42722
Surr: DNOP	104	50.6-138		%Rec	1	1/22/2019 12:48:09 PM	42722
EPA METHOD 8015D: GASOLINE RANGE						Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/22/2019 12:16:18 PM	42717
Surr: BFB	103	73.8-119		%Rec	1	1/22/2019 12:16:18 PM	42717
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.024		mg/Kg	1	1/22/2019 12:16:18 PM	42717
Toluene	ND	0.048		mg/Kg	1	1/22/2019 12:16:18 PM	42717
Ethylbenzene	ND	0.048		mg/Kg	1	1/22/2019 12:16:18 PM	42717
Xylenes, Total	ND	0.096		mg/Kg	1	1/22/2019 12:16:18 PM	42717
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	1/22/2019 12:16:18 PM	42717

Matrix: SOIL

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

- * Value exceeds Maximum Contaminant Level. D
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 16 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

1901785-003

Project:

Lab ID:

Client Sample ID: MW3 5.0-5.5' Collection Date: 1/14/2019 3:30:00 PM Received Date: 1/19/2019 11:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	ND	30		mg/Kg	20	1/23/2019 11:32:59 AM	42757
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/22/2019 1:10:09 PM	42722
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/22/2019 1:10:09 PM	42722
Surr: DNOP	101	50.6-138		%Rec	1	1/22/2019 1:10:09 PM	42722
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/22/2019 1:26:40 PM	42717
Surr: BFB	103	73.8-119		%Rec	1	1/22/2019 1:26:40 PM	42717
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	1/22/2019 1:26:40 PM	42717
Toluene	ND	0.049		mg/Kg	1	1/22/2019 1:26:40 PM	42717
Ethylbenzene	ND	0.049		mg/Kg	1	1/22/2019 1:26:40 PM	42717
Xylenes, Total	ND	0.098		mg/Kg	1	1/22/2019 1:26:40 PM	42717
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	1/22/2019 1:26:40 PM	42717

Matrix: SOIL

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

- * Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 16 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

1901785-004

Project:

Lab ID:

Client Sample ID: MW3 6.5-7.5' Collection Date: 1/14/2019 3:45:00 PM Received Date: 1/19/2019 11:10:00 AM

	Soll							
Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	: smb		
Chloride	ND	30	mg/Kg	20	1/23/2019 11:45:24 AM	42757		
EPA METHOD 8015M/D: DIESEL RANGE O	ORGANICS				Analyst	: CLP		
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	1/22/2019 1:54:46 PM	42722		
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	1/22/2019 1:54:46 PM	42722		
Surr: DNOP	105	50.6-138	%Rec	1	1/22/2019 1:54:46 PM	42722		
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/22/2019 1:50:11 PM	42717		
Surr: BFB	100	73.8-119	%Rec	1	1/22/2019 1:50:11 PM	42717		
EPA METHOD 8021B: VOLATILES					Analyst	: NSB		
Benzene	ND	0.024	mg/Kg	1	1/22/2019 1:50:11 PM	42717		
Toluene	ND	0.049	mg/Kg	1	1/22/2019 1:50:11 PM	42717		
Ethylbenzene	ND	0.049	mg/Kg	1	1/22/2019 1:50:11 PM	42717		
Xylenes, Total	ND	0.097	mg/Kg	1	1/22/2019 1:50:11 PM	42717		
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	1/22/2019 1:50:11 PM	42717		
	102	00 120	/01/00		1/22/2010 1.00.111 1			

Matrix: SOIL

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

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- 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 Page 4 of 16
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

1901785-005

Project:

Lab ID:

Client Sample ID: MW6 5.0 5.5' Collection Date: 1/14/2019 12:00:00 PM Received Date: 1/19/2019 11:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	ND	30		mg/Kg	20	1/23/2019 11:57:49 AM	42757
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: CLP
Diesel Range Organics (DRO)	10	9.8		mg/Kg	1	1/22/2019 2:16:40 PM	42722
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/22/2019 2:16:40 PM	42722
Surr: DNOP	103	50.6-138		%Rec	1	1/22/2019 2:16:40 PM	42722
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	10	5.0		mg/Kg	1	1/22/2019 2:13:35 PM	42717
Surr: BFB	49.3	73.8-119	S	%Rec	1	1/22/2019 2:13:35 PM	42717
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	1/22/2019 2:13:35 PM	42717
Toluene	ND	0.050		mg/Kg	1	1/22/2019 2:13:35 PM	42717
Ethylbenzene	ND	0.050		mg/Kg	1	1/22/2019 2:13:35 PM	42717
Xylenes, Total	ND	0.099		mg/Kg	1	1/22/2019 2:13:35 PM	42717
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	1/22/2019 2:13:35 PM	42717

Matrix: SOIL

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

- * Value exceeds Maximum Contaminant Level. D
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 16 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

Project:

Client Sample ID: MW6 7.5-8.5' Collection Date: 1/14/2019 12:10:00 PM Received Date: 1/19/2019 11:10:00 AM

Lab ID: 1901785-006	Matrix: SOIL	Received Date: 1/19/2019 11:10:00 AM						
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS						Analyst	: smb	
Chloride	ND	30		mg/Kg	20	1/23/2019 12:10:13 PM	42757	
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	CLP	
Diesel Range Organics (DRO)	110	9.8		mg/Kg	1	1/22/2019 2:38:42 PM	42722	
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/22/2019 2:38:42 PM	42722	
Surr: DNOP	105	50.6-138		%Rec	1	1/22/2019 2:38:42 PM	42722	
EPA METHOD 8015D: GASOLINE RANG	E					Analyst	: NSB	
Gasoline Range Organics (GRO)	120	5.0		mg/Kg	1	1/22/2019 3:00:28 PM	42717	
Surr: BFB	382	73.8-119	S	%Rec	1	1/22/2019 3:00:28 PM	42717	
EPA METHOD 8021B: VOLATILES						Analyst	: NSB	
Benzene	ND	0.025		mg/Kg	1	1/22/2019 3:00:28 PM	42717	
Toluene	0.057	0.050		mg/Kg	1	1/22/2019 3:00:28 PM	42717	
Ethylbenzene	ND	0.050		mg/Kg	1	1/22/2019 3:00:28 PM	42717	
Xylenes, Total	ND	0.10		mg/Kg	1	1/22/2019 3:00:28 PM	42717	
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	1/22/2019 3:00:28 PM	42717	

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

- * Value exceeds Maximum Contaminant Level. D
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 6 of 16 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

1901785-007

Project:

Lab ID:

Client Sample ID: MW5 4.5-5.5' Collection Date: 1/15/2019 9:10:00 AM Received Date: 1/19/2019 11:10:00 AM

Eub ID: 1901705 007	Mullia Soll							
Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	smb		
Chloride	ND	30	mg/Kg	20	1/23/2019 12:22:38 PM	42757		
EPA METHOD 8015M/D: DIESEL RANGE C	ORGANICS				Analyst	CLP		
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	1/22/2019 3:00:56 PM	42722		
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/22/2019 3:00:56 PM	42722		
Surr: DNOP	101	50.6-138	%Rec	1	1/22/2019 3:00:56 PM	42722		
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	1/22/2019 3:47:29 PM	42717		
Surr: BFB	102	73.8-119	%Rec	1	1/22/2019 3:47:29 PM	42717		
EPA METHOD 8021B: VOLATILES					Analyst	NSB		
Benzene	ND	0.024	mg/Kg	1	1/22/2019 3:47:29 PM	42717		
Toluene	ND	0.048	mg/Kg	1	1/22/2019 3:47:29 PM	42717		
Ethylbenzene	ND	0.048	mg/Kg	1	1/22/2019 3:47:29 PM	42717		
Xylenes, Total	ND	0.097	mg/Kg	1	1/22/2019 3:47:29 PM	42717		
Surr: 4-Bromofluorobenzene	104	80-120	%Rec	1	1/22/2019 3:47:29 PM	42717		

Matrix: SOIL

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

- * Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 7 of 16 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Analytical Report Lab Order 1901785

Date Reported: 2/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

1901785-008

Project:

Lab ID:

Client Sample ID: MW5 8-9' Collection Date: 1/15/2019 9:30:00 AM Received Date: 1/19/2019 11:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	ND	30		mg/Kg	20	1/23/2019 12:35:02 PM	42757
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: CLP
Diesel Range Organics (DRO)	86	9.5		mg/Kg	1	1/22/2019 3:23:04 PM	42722
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/22/2019 3:23:04 PM	42722
Surr: DNOP	103	50.6-138		%Rec	1	1/22/2019 3:23:04 PM	42722
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	29	4.9		mg/Kg	1	1/22/2019 4:11:02 PM	42717
Surr: BFB	79.9	73.8-119		%Rec	1	1/22/2019 4:11:02 PM	42717
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	1/22/2019 4:11:02 PM	42717
Toluene	ND	0.049		mg/Kg	1	1/22/2019 4:11:02 PM	42717
Ethylbenzene	ND	0.049		mg/Kg	1	1/22/2019 4:11:02 PM	42717
Xylenes, Total	ND	0.098		mg/Kg	1	1/22/2019 4:11:02 PM	42717
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	1/22/2019 4:11:02 PM	42717

Matrix: SOIL

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

- * Value exceeds Maximum Contaminant Level. D
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 8 of 16 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

1901785-009

Project:

Lab ID:

Client Sample ID: MW5 14.5-15.5' Collection Date: 1/15/2019 10:05:00 AM Received Date: 1/19/2019 11:10:00 AM

	Sold Sold		necci cu Dut		19/2019 11:10:00 11:11	
Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	ND	30	mg/Kg	20	1/23/2019 12:47:27 PM	42757
EPA METHOD 8015M/D: DIESEL RANGE C	RGANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	1/22/2019 3:45:02 PM	42722
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	1/22/2019 3:45:02 PM	42722
Surr: DNOP	99.5	50.6-138	%Rec	1	1/22/2019 3:45:02 PM	42722
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	1/22/2019 4:57:52 PM	42717
Surr: BFB	99.8	73.8-119	%Rec	1	1/22/2019 4:57:52 PM	42717
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	1/22/2019 4:57:52 PM	42717
Toluene	ND	0.046	mg/Kg	1	1/22/2019 4:57:52 PM	42717
Ethylbenzene	ND	0.046	mg/Kg	1	1/22/2019 4:57:52 PM	42717
Xylenes, Total	ND	0.093	mg/Kg	1	1/22/2019 4:57:52 PM	42717
Surr: 4-Bromofluorobenzene	101	80-120	%Rec	1	1/22/2019 4:57:52 PM	42717

Matrix: SOIL

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

- * Value exceeds Maximum Contaminant Level. D
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 9 of 16 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Analytical Report
Lab Order 1901785

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 2/5/2019

CLIENT: Timberwolf Environmental		Cl	ient Sample II): M	W4 5-6'	
Project: Kaufman #1		(Collection Date	e: 1/1	5/2019 1:35:00 PM	
Lab ID: 1901785-010	Matrix: SOIL		Received Date	e: 1/1	9/2019 11:10:00 AM	
Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	ND	30	mg/Kg	20	1/23/2019 12:59:52 PM	42757
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	1/22/2019 4:07:07 PM	42722
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/22/2019 4:07:07 PM	42722
Surr: DNOP	99.1	50.6-138	%Rec	1	1/22/2019 4:07:07 PM	42722
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	1/22/2019 6:54:48 PM	42717
Surr: BFB	98.2	73.8-119	%Rec	1	1/22/2019 6:54:48 PM	42717
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	1/22/2019 6:54:48 PM	42717
Toluene	ND	0.048	mg/Kg	1	1/22/2019 6:54:48 PM	42717
Ethylbenzene	ND	0.048	mg/Kg	1	1/22/2019 6:54:48 PM	42717
Xylenes, Total	ND	0.096	mg/Kg	1	1/22/2019 6:54:48 PM	42717
Surr: 4-Bromofluorobenzene	100	80-120	%Rec	1	1/22/2019 6:54:48 PM	42717

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

- * 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 Page 10 of 16
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report
Lab Order 1901785

Date Reported: 2/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

1901785-011

Project:

Lab ID:

Client Sample ID: MW4 8-9' Collection Date: 1/15/2019 1:45:00 PM Received Date: 1/19/2019 11:10:00 AM

	Mutha Doll		Received Dat		19/2019 11:10:00 11:11	
Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	ND	30	mg/Kg	20	1/23/2019 1:37:06 PM	42757
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	: CLP
Diesel Range Organics (DRO)	130	9.9	mg/Kg	1	1/22/2019 4:28:57 PM	42722
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	1/22/2019 4:28:57 PM	42722
Surr: DNOP	103	50.6-138	%Rec	1	1/22/2019 4:28:57 PM	42722
EPA METHOD 8015D: GASOLINE RANGE	E				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	1/22/2019 7:18:06 PM	42717
Surr: BFB	99.4	73.8-119	%Rec	1	1/22/2019 7:18:06 PM	42717
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	1/22/2019 7:18:06 PM	42717
Toluene	ND	0.047	mg/Kg	1	1/22/2019 7:18:06 PM	42717
Ethylbenzene	ND	0.047	mg/Kg	1	1/22/2019 7:18:06 PM	42717
Xylenes, Total	ND	0.094	mg/Kg	1	1/22/2019 7:18:06 PM	42717
Surr: 4-Bromofluorobenzene	101	80-120	%Rec	1	1/22/2019 7:18:06 PM	42717

Matrix: SOIL

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

- * 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 Page 11 of 16
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Client:	Timberw	volf Environmental
Project:	Kaufmar	n #1
Sample ID	MB-42748	SampType: MBLK TestCode: EPA Method 300.0: Anions
Client ID:	PBS	Batch ID: 42748 RunNo: 57179
Prep Date:	1/22/2019	Analysis Date: 1/22/2019 SeqNo: 1912654 Units: mg/Kg
	1/22/2010	
Analyte		Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual ND 1.5
Chloride		ND 1.5
Sample ID	LCS-42748	SampType: LCS TestCode: EPA Method 300.0: Anions
Client ID:	LCSS	Batch ID: 42748 RunNo: 57179
Prep Date:	1/22/2019	Analysis Date: 1/22/2019 SeqNo: 1912655 Units: mg/Kg
Analyte		Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		14 1.5 15.00 0 94.2 90 110
Sample ID	MB-42757	SampType: MBLK TestCode: EPA Method 300.0: Anions
Client ID:	PBS	Batch ID: 42757 RunNo: 57220
Prep Date:	1/23/2019	Analysis Date: 1/23/2019 SeqNo: 1914002 Units: mg/Kg
Analyte		Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		ND 1.5
Sample ID	LCS-42757	SampType: LCS TestCode: EPA Method 300.0: Anions
Client ID:	LCSS	Batch ID: 42757 RunNo: 57220
Prep Date:		Analysis Date: 1/23/2019 SeqNo: 1914003 Units: mg/Kg
		Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Analyte Chloride		15 1.5 15.00 0 97.5 90 110
onionac		

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 Detection Limit
- W Sample container temperature is out of limit as specified

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Client: Timberv Project: Kaufmar	volf Enviro n #1	nmental								
Sample ID MB-42722	Samp	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: PBS	Batc	h ID: 42	722	R	RunNo: 5	7155				
Prep Date: 1/21/2019	Analysis E	Date: 1/	22/2019	S	SeqNo: 1	912133	Units: mg/H	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		101	50.6	138			
Sample ID LCS-42722	Samp	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batc	h ID: 42	722	R	anNo: 5	7155				
Prep Date: 1/21/2019	Analysis [Date: 1/	22/2019	S	SeqNo: 1	912134	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	107	63.9	124			
Surr: DNOP	4.8		5.000		96.4	50.6	138			

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 Detection Limit
- W Sample container temperature is out of limit as specified

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Client: Project:	Timberwo Kaufman	olf Enviror #1	nmenta	1							
Sample ID	MB-42717	SampT	ype: M	BLK	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	PBS	Batch	n ID: 42	717	F	RunNo: 5	7168				
Prep Date:	1/21/2019	Analysis D	ate: 1	/22/2019	S	SeqNo: 1	912285	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	e Organics (GRO)	ND 1100	5.0	1000		106	73.8	119			
Sample ID	LCS-42717	SampT	ype: LC	cs	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	LCSS	Batch	n ID: 42	717	F	RunNo: 5	7168				
Prep Date:	1/21/2019	Analysis D	ate: 1	/22/2019	S	SeqNo: 1	912286	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	28	5.0	25.00	0	114	80.1	123			
Surr: BFB		1200		1000		120	73.8	119			S
Sample ID	1901785-001AMS	SampT	ype: M	S	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	MW-2 5'	Batch	n ID: 42	717	F	RunNo: 5	7168				
Prep Date:	1/21/2019	Analysis D	ate: 1	/22/2019	S	SeqNo: 1	912289	Units: mg/ł	۲g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	25	5.0	24.93	0	99.1	69.1	142			
Surr: BFB		1200		997.0		116	73.8	119			
Sample ID	1901785-001AMSI	D SampT	ype: M	SD	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	MW-2 5'	Batch	n ID: 42	717	F	RunNo: 5	7168				
Prep Date:	1/21/2019	Analysis D	ate: 1	/22/2019	S	SeqNo: 1	912290	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	23	4.7	23.47	0	96.2	69.1	142	9.02	20	
Surr: BFB		1100		939.0		116	73.8	119	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 Detection Limit
- W Sample container temperature is out of limit as specified

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Client: Timberw Project: Kaufman	volf Enviro 1 #1	onmental								
Sample ID MB-42717	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	h ID: 42	717	F	RunNo: 5	7168				
Prep Date: 1/21/2019	Analysis [Date: 1/	22/2019	S	SeqNo: 1	912310	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			
Sample ID LCS-42717	Samp	Гуре: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: 42	717	F	RunNo: 5	7168				
Prep Date: 1/21/2019	Analysis [Date: 1/	22/2019	Ş	SeqNo: 1	912311	Units: mg/h	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	92.2	80	120			
Toluene	0.95	0.050	1.000	0	95.0	80	120			
Ethylbenzene	0.96	0.050	1.000	0	95.8	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.6	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			
Sample ID 1901785-002AMS	Samp	Гуре: М	6	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: MW2 6.5-7.5'	Batc	hID: 42	717	F	RunNo: 5	7168				
Prep Date: 1/21/2019	Analysis [Date: 1/	22/2019	S	SeqNo: 1	912314	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.023	0.9363	0	89.2	63.9	127			
Toluene	0.88	0.047	0.9363	0.009693	92.9	69.9	131			
Ethylbenzene	0.89	0.047	0.9363	0	95.6	71	132			
Xylenes, Total	2.7	0.094	2.809	0	96.1	71.8	131			
Surr: 4-Bromofluorobenzene	0.99		0.9363		106	80	120			
Sample ID 1901785-002AMS	D Samp	Гуре: М	SD	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: MW2 6.5-7.5'	Batc	h ID: 42	717	F	RunNo: 5	7168				
Prep Date: 1/21/2019	Analysis [Date: 1/	22/2019	S	SeqNo: 1	912315	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.024	0.9497	0	82.8	63.9	127	5.94	20	

1/21/2019	Analysis D	Date: 1/	22/2019	S	SeqNo: 1	912315	Units: mg/k	٢g
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD
	0.79	0.024	0.9497	0	82.8	63.9	127	5.94
	0.82	0.047	0.9497	0.009693	85.5	69.9	131	6.82
	0.84	0.047	0.9497	0	88.0	71	132	6.87

0

2.849

0.9497

Qualifiers:

Toluene

Ethylbenzene

Xylenes, Total

- Value exceeds Maximum Contaminant Level. *
- Sample Diluted Due to Matrix D

Surr: 4-Bromofluorobenzene

Н Holding times for preparation or analysis exceeded

2.5

1.0

0.095

- ND Not Detected at the Reporting Limit
- Practical Quanitative Limit PQL
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range

89.0

105

- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

71.8

80

131

120

6.24

0

WO#: 1901785 05-Feb-19

20

20

20

0

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Client:	Timberwo	olf Environm	nental	l							
Project:	Kaufman	#1									
Sample ID	MB-42930	SampTyp	<u>⊳</u> . MF	SI K	Tes	tCode: V	Valklev Blac	k TOC/FOC/C	M		
Client ID:		Batch I					•				
	PBS					lunNo: 5					
Prep Date:	2/1/2019	Analysis Date	e: 2/	1/2019	S	SeqNo: 1	920834	Units: %C			
Analyte		Result I	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ТОС		ND	0.14								
Sample ID	LCS-42930	SampTyp	e: LC	s	Tes	tCode: V	Valkley Blac	k TOC/FOC/C	DM		
Client ID:	LCSS	Batch II): 42	930	R	lunNo: 5	57408				
Prep Date:	2/1/2019	Analysis Date	e: 2/	/1/2019	S	SeqNo: 1	920835	Units: % C			
Analyte		Result I	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TOC		3.2	0.13	2.740	0	118	80	120			
TOC	1901785-001AMS	3.2 SampTyp		-	-	-		120 k TOC/FOC/C	DM		
TOC	1901785-001AMS MW-2 5'		e: MS	6	Tes	-	Valkley Blac		DM		
TOC Sample ID	MW-2 5'	SampTyp	e: MS	S 930	Tes	tCode: V	Valkley Blac		DM		
TOC Sample ID Client ID:	MW-2 5'	SampTyp Batch II Analysis Date	e: MS	5 930 /1/2019	Tes	tCode: V	Valkley Blac	k TOC/FOC/C	OM %RPD	RPDLimit	Qual
TOC Sample ID Client ID: Prep Date:	MW-2 5'	SampTyp Batch II Analysis Date	e: MS D: 42 e: 2/	5 930 /1/2019	Tes R S	tCode: V RunNo: 5 SeqNo: 1	Valkley Blac 57408 1920837	k TOC/FOC/C Units: % C		RPDLimit	Qual
TOC Sample ID Client ID: Prep Date: Analyte TOC	MW-2 5'	SampTyp Batch II Analysis Date Result I 3.3	e: M D: 42 e: 2/ PQL 0.13	5 930 1/2019 SPK value 2.740	Tes F S SPK Ref Val 0	tCode: V RunNo: f SeqNo: 1 %REC 119	Valkley Blac 57408 920837 LowLimit 75	k TOC/FOC/C Units: % C HighLimit	%RPD	RPDLimit	Qual
TOC Sample ID Client ID: Prep Date: Analyte TOC	MW-2 5' 2/1/2019	SampTyp Batch II Analysis Date Result I 3.3	e: MS D: 42 e: 2/ PQL 0.13 e: MS	5 930 11/2019 SPK value 2.740	Tes R SPK Ref Val 0 Tes	tCode: V RunNo: f SeqNo: 1 %REC 119	Valkley Blac 57408 920837 LowLimit 75 Valkley Blac	k TOC/FOC/C Units: % C HighLimit 125	%RPD	RPDLimit	Qual
TOC Sample ID Client ID: Prep Date: Analyte TOC Sample ID	MW-2 5' 2/1/2019 1901785-001AMSE MW-2 5'	SampTyp Batch II Analysis Date Result I 3.3 D SampTyp	e: MS D: 42 e: 2/ PQL 0.13 e: MS D: 42	5 930 1/2019 SPK value 2.740 5D 930	Tes SPK Ref Val 0 Tes R	tCode: V RunNo: £ GeqNo: 1 %REC 119 tCode: V	Valkley Blac 57408 1920837 LowLimit 75 Valkley Blac 57408	k TOC/FOC/C Units: % C HighLimit 125	%RPD	RPDLimit	Qual
TOC Sample ID Client ID: Prep Date: Analyte TOC Sample ID Client ID:	MW-2 5' 2/1/2019 1901785-001AMSE MW-2 5'	SampTyp Batch II Analysis Date Result I 3.3 D SampTyp Batch II Analysis Date	e: MS D: 42 e: 2/ PQL 0.13 e: MS D: 42	S 930 1/2019 SPK value 2.740 SD 930 1/2019	Tes SPK Ref Val 0 Tes R	tCode: V RunNo: 5 GeqNo: 1 %REC 119 tCode: V RunNo: 5 GeqNo: 1	Valkley Blac 57408 1920837 LowLimit 75 Valkley Blac 57408	k TOC/FOC/C Units: % C HighLimit 125 k TOC/FOC/C	%RPD	RPDLimit	Qual

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 Detection Limit
- W Sample container temperature is out of limit as specified

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HALL ENVIRONMENTAL ANALYSIS LABORATORY	-	TEL	Environme : 505-345-3 Vebsite: www	490 Albuquerq 1975 FAX:	1 Hawl we, NM 505-34	kins NE 1 87109 15-4107	San	nple Log-In C	heck List
Client Name: TIMBERWOL	F ENVIRON	Work	Order Num	ber: 190	1785			RcptNo:	1
Received By: Victoria Zell	ar	1/19/201	9 11:10:00	D AM		Vic	t n ia Gel 1 SPace	lan	
Completed By: Leah Baca Reviewed By: VV2.//2///	9	1/21/201	9 9:01:44	АМ		La	l Bace	λ.	
LB DAD 1/7									
1. Is Chain of Custody complet	e?			Yes		h	No 🗆	Not Present	
 How was the sample deliver 				Cou		I			
2 .				224					
Log In 3. Was an attempt made to coo	ol the samples?			Yes		Ν	No 🗌	NA 🗌	
4. Were all samples received at	t a temperature	of>0°Ct	o 6.0°C	Yes		M	10 🗌	NA 🗌	
5. Sample(s) in proper containe	er(s)?			Yes		٢	10 🗌		
6. Sufficient sample volume for	indicated test(s)	?		Yes	✓	N	lo 🗌		
7. Are samples (except VOA an	d ONG) properly	y preserve	d?	Yes	\checkmark	N	o 🗌		
8. Was preservative added to b	ottles?			Yes		N	lo 🗹	NA 🗌	
9. VOA vials have zero headspa	ace?			Yes		N	io 🗌	No VOA Vials 🗹	
10. Were any sample containers	received broke	n?		Yes		N	10 ☑		
11. Does paperwork match bottle (Note discrepancies on chain				Yes		N	io 🗌	# of preserved bottles checked for pH: (<2 or	12 unless noted)
12. Are matrices correctly identifi	••	Custody?		Yes	\checkmark	N	lo 🗌	Adjusted?	· · · · · · · · · · · · · · · · · · ·
13. Is it clear what analyses were	e requested?			Yes	\checkmark	N	lo 🗌		
14. Were all holding times able to (If no, notify customer for aut				Yes		N	lo 🗆	Checked by: 1	P/1/21/19
Special Handling (if appli	cable)								
15. Was client notified of all disc		his order?		Yes		1	No 🗌	NA 🗹	
Person Notified:			Date	- 				······································	
By Whom:			Via:	🗌 eM	ail 🗌	Phone	🔲 Fax	In Person	
Regarding:									
Client Instructions:		······		·····					
16. Additional remarks:									
17. <u>Cooler Information</u>	un benund war ausgestigt operation operation of the second s	1911 1921 1945 1946 1946 1946 1946 1946 1946 1946 1946	in an air an			• 1011. · • · • · · · · · ·		A	
Cooler No Temp °C 1 3.7 C	Condition Se Good Yes	eal Intact	Seal No	Seal D	ate	Signe	ed By		
	Bood Yes			******				- energy gamma memory	

Client: Tim burwall Environal Rust Mailing Address: Project Name: Mailing Address: Project Manager: Phone #: \$75-334-2134 Phone #: \$74-5 Phone #: \$75-334 Phone #: \$75-334	BTEX/MTBE/TMB's (8021) BTEX/MTBE/TMB's (8021) C(idu 1) - COU	HALLENVIRON ANDS (GRO / DRO / MRO) B081 Pesticides/8082 PCB's PPH4 by 8310 or 82705IMS PAH5 by 8310 or 82705IMS RCI, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄ PAH5 by 8310 or 82705IMS RCRA 8 Metals R260 (VOA) R270 (Semi-VOA) Fax 505-345-3075 Fax 505-345-3075 Fax 606 R270 (Semi-VOA) R270 (Semi-VOA	Total Organization
Ing Address: Project Name Ing Address: Project Name In Fax#: $775 - 324 - 2.134$ In Fax#: Project Mane In Cordan In Level 4 (Full Validation) In fact In Project Mane In fact In Project Mane In fact In Project Mane In Matrix Sample Name	тен HEAL No ССе (- <u>HEAL</u> No. 1971) 7 ВС - ССИ	 TPH:8015D(GRO / DRO / MRO) 8081 Pesticides/8082 PCB's 901 Hawkins Nm 400 Hawkins Nm 505 445 505 445<th>1042 Organscroba</th>	1042 Organscroba
ng Address: Project #: Ie #: $5779-324-2439$ Project #: Ior Fax#: Project Mane Ior Fax#: On Fax# andard Level 4 (Full Validation) aditation: D & On Fore aditation: D & On Fore aditation: D & Other D (Type) # of Coolers: D (Type) # full Validation) Aftice Confainer Time Matrix Sample Name Type and # $7, 455 5 M W 2 $	mar #1	4001 Hawkins MRO MR	
Ie #: $579-334-2434$ Project #: Ior Fax#: Project Mane Ior Fax#: Project Mane Ior Fax#: Project Mane Ior Fax#: Project Mane Ior Fax#: Ior Fax#: Ior Fax#: Project Mane Ior Fax#: Ior Fax#: Ior Fax#: Ior Fax#: Ior Fax#: Ior Fax#: Ior Fax#: Ior Fax#: Ior Fax#: Ior Complex: Ior Coller: Ior Cooler: Ior Type # of Cooler: Imme Matrix Imme Matrix Imme Nuu<	206e [□ No □ No 191 - 138 191 - 38 - 301 - 301	TPH:8015D(GRO / DRO / MRO) 8081 Pesticides/8082 PCB's 80	
Ie #: 575-334-2137 Project Man I or Fax#: Project Man C Package: I of Project Man C Package: I bevel 4 (Full Validation) andard I bevel 4 (Full Validation) I type I bevel 4 (Full Validation) I type I bevel 4 (Full Validation) I type I bevel 4 (Full Validation)	20%e/ □ No □ No □ HEAL No 197 01 7 95 - (x)1	▲ TPH:8015D(GRO / DRO / MRO) 8081 Pesticides/8082 PCB's B081 Pesticides/8082 PCB's PPHs by 8310 or 8270SIMS RCRA 8 Metals CI, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄ 8260 (VOA) 8270 (Semi-VOA) 8270 (Semi-VOA) 8270 (Semi-VOA)	1040 Branchon
I or Fax#: Project Mans C Package: I or Each andard □ Level 4 (Full Validation) anditation: □ Az Compliance Boltation: □ Az Compliance ELAC □ Other D (Type) # of Coolers: D (Type) # of Coolers: Mux Sample: Atrix Sample Name Atrix Sample Name Atrix Sample Name	□ No 	 TPH:8015D(GRO / DRO / MRO) 8081 Pesticides/8082 PCB's B081 Pesticides/8082 PCB's FDB (Method 504.1) PAHs by 8310 or 8270SiMS CI, F, Br, NO₃, NO₂, PO₄, SO₄ S200 (VOA) 8270 (Semi-VOA) 8270 (Semi-VOA) Total Coliform (Present/Absent) 	~ 1042 Byen Char
C Package: andard □ Level 4 (Full Validation) editation: □ Az Compliance Sampler: ELAC □ Other 0n fice and # of Coolers: DD (Type) # of Coolers: Time Matrix Sample Name Type and # 7 2 45 5 8 M W 2 5' VOVIN	□ No <u> - 13°</u> - 1910 (xu) - (xu)	 TPH:8015D(GRO / DRO / MRG 8081 Pesticides/8082 PCB's 8081 Pesticides/8082 PCB's EDB (Method 504.1) PAHs by 8310 or 8270SIMS CI, F, Br, NO₃, NO₂, PO₄, Sr 8250 (VOA) 8220 (Semi-VOA) 8270 (Semi-VOA) 	1040 Bryen Cubo
andard □ Level 4 (Full Validation) editation: □ Az Compliance Sampler: ELAC □ Other On Ice Bancher DD (Type) # of Coolers: DD (Type) # of Coolers: Cooler Temp Antice Sample Name Type and # Antice Science Container Antice Science Container	□ No 	 TPH:8015D(GRO / DRO / 8081 Pesticides/8082 PC 8081 Pesticides/8082 PC EDB (Method 504.1) PAHs by 8310 or 82705li RCRA 8 Metals CI, F, Br, NO₃, NO₂, PO 8270 (Semi-VOA) 8270 (Semi-VOA) 	1040 Oranzan
editation: Az Compliance Sampler: On Ice # of Coolers: On Ice # of Coolers: Cooler Temp Cooler Temp Time Matrix Sample Name 7345 5 8 M W 2 5' VOVIN	- No - <u>H.3</u> - сол - сол	 TPH:8015D(GRO / DF 8081 Pesticides/8082 8081 Pesticides/8082 EDB (Method 504.1) PAHs by 8310 or 827 CI, F, Br, NO₃, NO₂, S260 (VOA) 82270 (Semi-VOA) Total Coliform (Preseited) 	Intel Orden
D (Type) D of Coolers D (Type) # of Coolers D (Type) # of Coolers P (Y,Y,Y) # of Coolers A (Y,Y,Y) # of Coolers A (Y,Y,Y) # of Coolers	□ No 0 1130 19 11785 - (201 - (201	 TPH:8015D(GRO 8081 Pesticides/8 8081 Pesticides/8 8081 Pesticides/8 8060 (WOA) 8250 (YOA) 8270 (Semi-VOA) 8270 (Semi-VOA) 	total Organ
Time Matrix Sample Name Type and # Type and # 7345 5 8/M (\mathcal{W} 2 5/ VOVA	<u>ес. Ц.Зес</u>) <u>- Ц.З</u> ес 1910) 7,85 - схи	 TPH:8015D(G 8081 Pesticic 8081 Pesticic 8081 Pesticic 8081 Pesticic 8081 Pesticic 8260 (VOA) 8270 (Semi-V 	2 12401
Time Matrix Sample Name Container 7 /34/5 8/W.2 5/ VOVAN	1901 795 - 001	 TPH:8018 8081 Pes 8260 (VC 8260 (VC 8270 (Se 8270 (Se 	ryal
Time Matrix Sample Name Container アソア AT NU2 5' VOVAN アリレン シティング	HEAL No: 194017795 - 001	TPH: 8081 RCR R2R0	<u>a1</u>
9 1345 5 3MW2 5' Varan	- (00)		-
1 122 WW2 6.5.7, 1			~
	200		
191520 S Mus 50-5,1'	- 003		
19 1545 Shu3 6.5-754	-004		
4/4 1200 S MINU 5.0 5.81	- 005		
	Ø(C)0		
5/4 CTUS 5 MUS 4.5.53	- 004		
2/4 0530 5 MW 6 5-51	- 018		
	- 0.04		
Str 1335 5 MW + 5-6'	1/ -010		
1245 5 1444 8-91 V	-110-		_
Date: Time: Relinquished by: Via:	Date / Time	Remarks:	
5/4/800 MW	10/8/	allars.	
Date: Time: Rejuduished by: North Regenced by: Vi 15/19 1641 POR NOV	Via: UPURUN Date 'Time	e da _n	



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

January 25, 2019

Jim Foster Timberwolf Environmental 1920 W Villa Maria Ste 205 Bryan, TX 77807 TEL: (979) 324-2139 FAX

OrderNo.: 1901788

RE: Kaufman #1

Dear Jim Foster:

Hall Environmental Analysis Laboratory received 4 sample(s) on 1/19/2019 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 <u>www.hallenvironmental.com</u> 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Date Reported: 1/25/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

Project:

Client Sample ID: MW1 2.5-3.5' Collection Date: 1/15/2019 11:30:00 AM Received Date: 1/19/2019 11:10:00 AM

Lab ID: 1901788-001	Matrix: SOIL	Received Date: 1/19/2019 11:10:00 AM							
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS						Analyst	: smb		
Chloride	ND	30		mg/Kg	20	1/23/2019 1:49:31 PM	42757		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	CLP		
Diesel Range Organics (DRO)	600	9.8		mg/Kg	1	1/23/2019 12:54:33 PM	42722		
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/23/2019 12:54:33 PM	42722		
Surr: DNOP	105	50.6-138		%Rec	1	1/23/2019 12:54:33 PM	42722		
EPA METHOD 8015D: GASOLINE RANG	E					Analyst	: NSB		
Gasoline Range Organics (GRO)	1200	99		mg/Kg	20	1/22/2019 7:41:28 PM	42717		
Surr: BFB	298	73.8-119	S	%Rec	20	1/22/2019 7:41:28 PM	42717		
EPA METHOD 8021B: VOLATILES						Analyst	: NSB		
Benzene	0.96	0.50		mg/Kg	20	1/22/2019 7:41:28 PM	42717		
Toluene	22	0.99		mg/Kg	20	1/22/2019 7:41:28 PM	42717		
Ethylbenzene	7.0	0.99		mg/Kg	20	1/22/2019 7:41:28 PM	42717		
Xylenes, Total	92	2.0		mg/Kg	20	1/22/2019 7:41:28 PM	42717		
Surr: 4-Bromofluorobenzene	117	80-120		%Rec	20	1/22/2019 7:41:28 PM	42717		

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

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- 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 Page 1 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1901788 Date Reported: 1/25/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

1901788-002

Project:

Lab ID:

Client Sample ID: MW1 4.5-5.5' Collection Date: 1/15/2019 11:40:00 AM Received Date: 1/19/2019 11:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	ND	30		mg/Kg	20	1/23/2019 2:26:45 PM	42757
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS					Analyst	CLP
Diesel Range Organics (DRO)	31	9.3		mg/Kg	1	1/23/2019 1:16:42 PM	42722
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/23/2019 1:16:42 PM	42722
Surr: DNOP	104	50.6-138		%Rec	1	1/23/2019 1:16:42 PM	42722
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/22/2019 8:28:12 PM	42717
Surr: BFB	114	73.8-119		%Rec	1	1/22/2019 8:28:12 PM	42717
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	1/22/2019 8:28:12 PM	42717
Toluene	ND	0.049		mg/Kg	1	1/22/2019 8:28:12 PM	42717
Ethylbenzene	ND	0.049		mg/Kg	1	1/22/2019 8:28:12 PM	42717
Xylenes, Total	0.12	0.099		mg/Kg	1	1/22/2019 8:28:12 PM	42717
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	1/22/2019 8:28:12 PM	42717

Matrix: SOIL

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

Oualifiers:

- * Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 8 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Date Reported: 1/25/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

1901788-003

Project:

Lab ID:

Client Sample ID: MW1 6.5-7.5' Collection Date: 1/15/2019 11:50:00 AM Received Date: 1/19/2019 11:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS						Analyst	: smb			
Chloride	ND	30		mg/Kg	20	1/23/2019 2:39:10 PM	42757			
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS					Analyst	: CLP			
Diesel Range Organics (DRO)	200	9.6		mg/Kg	1	1/23/2019 2:22:37 PM	42722			
Motor Oil Range Organics (MRO)	48	48		mg/Kg	1	1/23/2019 2:22:37 PM	42722			
Surr: DNOP	105	50.6-138		%Rec	1	1/23/2019 2:22:37 PM	42722			
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB			
Gasoline Range Organics (GRO)	4.7	4.6		mg/Kg	1	1/22/2019 9:14:43 PM	42717			
Surr: BFB	125	73.8-119	S	%Rec	1	1/22/2019 9:14:43 PM	42717			
EPA METHOD 8021B: VOLATILES						Analyst	: NSB			
Benzene	ND	0.023		mg/Kg	1	1/22/2019 9:14:43 PM	42717			
Toluene	ND	0.046		mg/Kg	1	1/22/2019 9:14:43 PM	42717			
Ethylbenzene	ND	0.046		mg/Kg	1	1/22/2019 9:14:43 PM	42717			
Xylenes, Total	ND	0.092		mg/Kg	1	1/22/2019 9:14:43 PM	42717			
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	1/22/2019 9:14:43 PM	42717			

Matrix: SOIL

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

Oualifiers:

*

- Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 8 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Analytical Report Lab Order 1901788 Date Reported: 1/25/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Timberwolf Environmental

Kaufman #1

1901788-004

Project:

Lab ID:

Client Sample ID: MW1 14-15' Collection Date: 1/15/2019 12:25:00 PM Received Date: 1/19/2019 11:10:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst	: smb				
Chloride	ND	30	mg/Kg	20	1/23/2019 2:51:34 PM	42757				
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	: CLP				
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	1/22/2019 6:18:59 PM	42722				
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	1/22/2019 6:18:59 PM	42722				
Surr: DNOP	105	50.6-138	%Rec	1	1/22/2019 6:18:59 PM	42722				
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB				
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	1/22/2019 10:01:13 PM	42717				
Surr: BFB	99.0	73.8-119	%Rec	1	1/22/2019 10:01:13 PM	42717				
EPA METHOD 8021B: VOLATILES					Analyst	: NSB				
Benzene	ND	0.025	mg/Kg	1	1/22/2019 10:01:13 PM	42717				
Toluene	ND	0.050	mg/Kg	1	1/22/2019 10:01:13 PM	42717				
Ethylbenzene	ND	0.050	mg/Kg	1	1/22/2019 10:01:13 PM	42717				
Xylenes, Total	ND	0.10	mg/Kg	1	1/22/2019 10:01:13 PM	42717				
Surr: 4-Bromofluorobenzene	94.3	80-120	%Rec	1	1/22/2019 10:01:13 PM	42717				

Matrix: SOIL

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

Qualifiers:	
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*

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- 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 Page 4 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Client: Project:		berwolf Environ man #1	mental								
Sample ID	MB-42757	SampTy	pe: ME	BLK	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID:	PBS	Batch	ID: 42	757	F	RunNo: 5	7220				
Prep Date:	1/23/2019	Analysis Da	ite: 1/	23/2019	5	SeqNo: 1	914002	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-42757	SampTy	pe: LC	S	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID:	LCSS	Batch	ID: 42	757	F	RunNo: 5	7220				
Prep Date:	1/23/2019	Analysis Da	ite: 1/	23/2019	S	SeqNo: 1	914003	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		15	1.5	15.00	0	97.5	90	110			

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 Detection Limit
- W Sample container temperature is out of limit as specified

Page 5 of 8

Client: Timberw Project: Kaufmar	olf Environmo 1 #1	ental						
Sample ID MB-42722	SampType	: MBLK	Tes	tCode: EPA Meth	od 8015M/D: Die	esel Rang	e Organics	
Client ID: PBS	Batch ID	: 42722	F	RunNo: 57155				
Prep Date: 1/21/2019	Analysis Date	: 1/22/2019	S	SeqNo: 1912133	Units: mg/K	٢g		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC LowLir	nit HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10						
Motor Oil Range Organics (MRO)	ND	50						
Surr: DNOP	10	10.00		101 50).6 138			
Sample ID LCS-42722	SampType	e: LCS	Tes	tCode: EPA Meth	od 8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch ID	: 42722	F	RunNo: 57155				
Prep Date: 1/21/2019	Analysis Date	1/22/2019	5	SeqNo: 1912134	Units: mg/K	٢g		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC LowLir	nit HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10 50.00	0	107 63	3.9 124			
Surr: DNOP	4.8	5.000		96.4 50).6 138			
Sample ID 1901788-004AMS	SampType	e: MS	Tes	tCode: EPA Meth	od 8015M/D: Die	esel Rang	e Organics	
Client ID: MW1 14-15'	Batch ID	: 42722	F	RunNo: 57173				
Prep Date: 1/21/2019	Analysis Date	1/23/2019	S	SeqNo: 1913196	Units: mg/K	٢g		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC LowLir	nit HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.6 48.17	0	104 53	3.5 126			
Surr: DNOP	4.6	4.817		96.5 50).6 138			
Sample ID 1901788-004AMS	D SampType	: MSD	Tes	tCode: EPA Meth	od 8015M/D: Die	esel Rang	e Organics	
Client ID: MW1 14-15'	Batch ID	42722	F	RunNo: 57173				
Prep Date: 1/21/2019	Analysis Date	: 1/23/2019	S	SeqNo: 1913238	Units: mg/k	٢g		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC LowLir	nit HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	9.7 48.73	0	104 53	3.5 126	1.09	21.7	
Surr: DNOP	4.6	4.873		95.0 50).6 138	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 Detection Limit
- W Sample container temperature is out of limit as specified

Page 6 of 8

Client: Project:	Timberv Kaufmar	volf Enviro n #1	nmental	1							
Sample ID MB	-42717	SampT	ype: MI	BLK	Tes	tCode: El	PA Method	8015D: Gasc	oline Rang	е	
Client ID: PB	s	Batch	n ID: 42	717	F	RunNo: 5	7168				
Prep Date: 1/	21/2019	Analysis D	ate: 1/	22/2019	S	SeqNo: 1	912285	Units: mg/H	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Org Surr: BFB	ganics (GRO)	ND 1100	5.0	1000		106	73.8	119			
Sample ID LC	S-42717	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: LC:	SS	Batch	n ID: 42	717	F	RunNo: 5	7168				
Prep Date: 1/	21/2019	Analysis D	ate: 1/	22/2019	S	SeqNo: 1	912286	Units: mg/ #	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Org Surr: BFB	ganics (GRO)	28 1200	5.0	25.00 1000	0	114 120	80.1 73.8	123 119			S

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 Detection Limit
- W Sample container temperature is out of limit as specified

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	berwolf Enviro fman #1	onmental	l							
Sample ID MB-42717	Samp	Type: ME	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: PBS	Bato	:h ID: 42	717	F	RunNo: 5	7168				
Prep Date: 1/21/2019	Analysis I	Date: 1/	22/2019	S	SeqNo: 1	912310	Units: mg/H	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			
Sample ID LCS-42717	Samp	Type: LC	s	Tes	tCode: E	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Bato	:h ID: 42	717	F	RunNo: 5	7168				
Prep Date: 1/21/2019	Analysis I	Date: 1/	22/2019	5	SeqNo: 1	912311	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	92.2	80	120			
Toluene	0.95	0.050	1.000	0	95.0	80	120			
Ethylbenzene	0.96	0.050	1.000	0	95.8	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.6	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
- 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 Detection Limit
- W Sample container temperature is out of limit as specified

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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 Nu	mber: 1901	788		RcptNo:	1
Received By:	Victoria Zellar	1/19/2019 11:10:	00 AM		Victoria, Bel	lan	
Completed By:	Leah Baca	1/21/2019 10:02:	30 AM		Victoria Bel Int SPace		
Reviewed By: Labeled	VV21/21/19 by DAD 1/21/19	-			and Junea		
Chain of Cus							
	ustody complete?		Yes	\checkmark	No 🗌	Not Present	
2. How was the	sample delivered?		<u>Cour</u>	<u>er</u>			
<u>Log In</u> 3. Was an attern	npt made to cool the samples?	?	Yes		No 🗌	na 🗌	
4. Were all samp	ples received at a temperature	e of >0° C to 6.0°C	Yes		No 📋	NA 🗌	
5. Sample(s) in	proper container(s)?		Yes		No 🗌		
6. Sufficient sam	ple volume for indicated test(s)?	Yes		No 🗌		
7. Are samples (except VOA and ONG) prope	rly preserved?	Yes		No 🗌		
8. Was preservat	tive added to bottles?		Yes		No 🗹	NA 🗌	
9. VOA vials have	e zero headspace?		Yes		No 🗌	No VOA Vials 🗹	
10. Were any san	nple containers received brok	en?	Yes		No 🗹 🛛	# of preserved	
	ork match bottle labels? ancies on chain of custody)		Yes		No 🗌	bottles checked for pH: (<2 or >	12 unless noted)
12. Are matrices of	correctly identified on Chain of	Custody?	Yes	✓	No 🗌	Adjusted?	
	t analyses were requested?		Yes		No 🗌		
	ng times able to be met? ustomer for authorization.)		Yes		No	Checked by: []	AD 1/21/19
Special Handl	ing (if applicable)						
	tified of all discrepancies with	this order?	Yes		No 🗌	NA 🗹	
Person	Notified:	Da	te		ANALY CONTRACTORY		
By Who	m:	Via	i: 🗌 eMa	il 🔲 Pho	ne 🗌 Fax	In Person	
Regardi	ing:						
Client Ir	nstructions:	**************************************					
16. Additional rer	marks:						

17. Cooler Information

୍ରି	ooler No 👘 Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.7	Good	Yes			
2	4.3	Good	Yes			

Chain-of-Custody Record	Turn-Around Time:							
Client: Timburs 1 En	→ Standard □ Rush						HALL ENVIRONMENTAL	_ >
Mailing Address:	Kaufman #2	490	4901 Hawkins NF	יש	Alburunnentar.com Alburue NM 87100	ILAI. CUI	87100	
	Project #:		505-345-3975			505_245_1107	107	
Phone #:	18006/			Analy	Analysis Request	quest	101	
email or Fax#:	Project Manager:			₽C		(1		
ige:	,	אאכ 1208)		os '⁺c		uəsq¥		
		੦ਬ		s, Pa		/Jue		
Compliance	Sampler: On Ice: WYes 🔤 No	0/0	(1.40		(A			
EDD (Type)		ย)	g po		·			
	Cooler Temp(induating cr)	19D(odtəl					
- - - - -	Preservative	08:Ha	91 P8 M) 80	3 АЯС Э , F, E	S) 02;)) [1 []	
Time Matrix Sample Name	Type and # Type 1.9 (0) 7-9	18 17 17	JI					
1.25-5-5 + min (och bilsi).	Varius Varues	- 001			_	2	3	
45th 140 5 MWI 4.5-5,5		- 002						
1/2/1/50 5 MW 2 6.5-2.		-013						
1, dr 1235 5 NW22 14-151		- 004						
			·					├
· · · · · · · · · · · · · · · · · · ·								
Relinquished by:	Via: Via: Date T	Time Remarks:) ぐいう					- -	
Date: Time: Rejudatished by: [[y] o Kul / / / / / / / .	Regerved by Via: Could bate Tir	Time 11/10						
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 developments. This serves as n	otice of this possibility. An	ly sub-contracted	lata will be	clearly not	ated on th	e analytical report.	



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

June 14, 2019

Jim Foster Timberwolf Environmental 1920 W Villa Maria Ste 205 Bryan, TX 77807 TEL: (979) 324-2139 FAX

RE: Kaufman No1

OrderNo.: 1901789

Dear Jim Foster:

Hall Environmental Analysis Laboratory received 6 sample(s) on 1/19/2019 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued February 1, 2019.

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. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Date Reported: 6/14/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	Timberwolf Environmental		Client Sample I	D: MW2	
Project:	Kaufman No1		Collection Dat	e: 1/17/2019 10:26:00 AM	
Lab ID:	1901789-001	Matrix: AQUEOUS	Received Dat	e: 1/19/2019 11:10:00 AM	
Analyses		Result	RL Qual Units	DF Date Analyzed	B

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	150	5.0	mg/L	10	1/21/2019 9:47:54 PM	R57149
EPA METHOD 8015D: GASOLINE RANGE					Analyst	AG
Gasoline Range Organics (GRO)	ND	0.050	mg/L	1	1/22/2019 11:56:31 AM	
Surr: BFB	98.6	70-130	%Rec	1	1/22/2019 11:56:31 AM	
EPA METHOD 8015M/D: DIESEL RANGE					Analyst	CLP
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	1/23/2019 9:58:20 AM	42745
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	1/23/2019 9:58:20 AM	42745
Surr: DNOP	110	70-130	%Rec	1	1/23/2019 9:58:20 AM	42745
EPA METHOD 8260B: VOLATILES					Analyst	AG
Benzene	ND	1.0	μg/L	1	1/22/2019 11:56:31 AM	
Toluene	ND	1.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
Ethylbenzene	ND	1.0	μg/L	1	1/22/2019 11:56:31 AM	B57171
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1	1/22/2019 11:56:31 AM	B57171
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	1/22/2019 11:56:31 AM	
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1	1/22/2019 11:56:31 AM	B57171
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1	1/22/2019 11:56:31 AM	B57171
Naphthalene	ND	2.0	μg/L	1	1/22/2019 11:56:31 AM	B57171
1-Methylnaphthalene	ND	4.0	μg/L	1	1/22/2019 11:56:31 AM	B57171
2-Methylnaphthalene	ND	4.0	μg/L	1	1/22/2019 11:56:31 AM	B57171
Acetone	ND	10	µg/L	1	1/22/2019 11:56:31 AM	B57171
Bromobenzene	ND	1.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
Bromodichloromethane	ND	1.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
Bromoform	ND	1.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
Bromomethane	ND	3.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
2-Butanone	ND	10	µg/L	1	1/22/2019 11:56:31 AM	B57171
Carbon disulfide	ND	10	µg/L	1	1/22/2019 11:56:31 AM	B57171
Carbon Tetrachloride	ND	1.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
Chlorobenzene	ND	1.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
Chloroethane	ND	2.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
Chloroform	ND	1.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
Chloromethane	ND	3.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
2-Chlorotoluene	ND	1.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
4-Chlorotoluene	ND	1.0	µg/L	1	1/22/2019 11:56:31 AM	-
cis-1,2-DCE	ND	1.0	µg/L	1	1/22/2019 11:56:31 AM	-
cis-1,3-Dichloropropene	ND	1.0	µg/L	1	1/22/2019 11:56:31 AM	B57171
1,2-Dibromo-3-chloropropane	ND	2.0	µg/L	1	1/22/2019 11:56:31 AM	
Dibromochloromethane	ND	1.0	μg/L	1	1/22/2019 11:56:31 AM	B57171

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 limitsP Sample pH Not In Range

RL Reporting Limit

Page 1 of 37

S % Recovery outside of range due to dilution or matrix

Date Reported: 6/14/2019

CLIENT: Timberwolf EnvironmentalProject: Kaufman No1Lab ID: 1901789-001	Matrix: AQUEOUS	(Collect		t e: 1/1	W2 17/2019 10:26:00 AM 19/2019 11:10:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	AG
Dibromomethane	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,2-Dichlorobenzene	ND	1.0		μg/L	1	1/22/2019 11:56:31 AM	B5717
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,4-Dichlorobenzene	ND	1.0		μg/L	1	1/22/2019 11:56:31 AM	B5717
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,1-Dichloroethene	ND	1.0		μg/L	1	1/22/2019 11:56:31 AM	B5717
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
2-Hexanone	ND	10		µg/L	1	1/22/2019 11:56:31 AM	B5717
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2019 11:56:31 AM	B5717
Methylene Chloride	ND	3.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
Styrene	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
tert-Butylbenzene	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
trans-1,2-DCE	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
Vinyl chloride	ND	1.0		µg/L	1	1/22/2019 11:56:31 AM	B5717
Xylenes, Total	ND	1.5		µg/L	1	1/22/2019 11:56:31 AM	B5717
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	1/22/2019 11:56:31 AM	B5717
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	1/22/2019 11:56:31 AM	B5717
Surr: Dibromofluoromethane	107	70-130		%Rec	1	1/22/2019 11:56:31 AM	B5717

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

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

Hall Environmental Analysis Laboratory, Inc.

В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits Р

Sample pH Not In Range

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RL Reporting Limit

Hall Environmental Analysi	s Laboratory, Ind		019			
CLIENT: Timberwolf Environmental		Client San	nple ID	: M	W2	
Project: Kaufman No1		Collectio	on Date	: 1/1	7/2019 10:26:00 AM	1
Lab ID: 1901789-001	Matrix: AQUEOUS	Receive	ed Date	: 1/1	9/2019 11:10:00 AM	1
Analyses	Result	RL Qual U	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analys	st: AG
Surr: Toluene-d8	103	70-130 ^o	%Rec	1	1/22/2019 11:56:31 A	M B57171

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
- JAnalyte detected below quantitation limitsPSample pH Not In Range
- P Sample pH Not In RL Reporting Limit

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Date Reported: 6/14/2019

Hall Environmental Analysis Laboratory, Inc. **CLIENT:** Timberwolf Environmental **Client Sample ID: MW3** Kaufman No1 Collection Date: 1/17/2019 12:15:00 PM **Project:** Lab ID: 1901789-002 Matrix: AQUEOUS Received Date: 1/19/2019 11:10:00 AM

EPA METHOD 8015M/D: DIESEL RANGE Analyst: CLP Diesel Range Organics (DRO) ND 1.0 mg/L 1 1/23/2019 11:04:31 AM 42745 Motor Oil Range Organics (MRO) ND 5.0 mg/L 1 1/23/2019 11:04:31 AM 42745 Surr: DNOP 10 0.20 70-10 %Rec 1 1/23/2019 11:04:31 AM 42745 EPA METHOD 8260B: VOLATILES Toluene 1 1/22/2019 122:09 PM 65717 Benzene ND 1.0 µg/L 1 1/22/2019 122:09 PM 65717 Toluene ND 1.0 µg/L 1 1/22/2019 122:09 PM 65717 Litybenzene ND 1.0 µg/L 1 1/22/2019 N2:209 PM 65717 1,2-4-Trimethylbenzene ND 1.0 µg/L 1 1/22/2019 N2:209 PM 65717 1,2-bichloroethane (EDB) ND 1.0 µg/L 1 1/22/2019 N2:209 PM 65717 1,2-bichloroethane (EDB) ND 1.0 µg/L 1 1/22/2019 N2:209 PM	Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE Analyst: Call Gasoline Range Organics (GRO) ND 0.050 mg/L 1 1/22/2019 1:22:09 PM R5711 Sur: BFB 97.0 70-130 %Rec 1 1/22/2019 1:22:09 PM R5712 EPA METHOD 8015M/D: DIESEL RANGE nalyst: CLP Diesel Range Organics (ORO) ND 1.0 mg/L 1 1/23/2019 11:04:31 AM 42745 Motor Oli Range Organics (MRO) ND 5.0 mg/L 1 1/23/2019 11:04:31 AM 42745 Sur: DNOP 102 70-130 %Rec 1 1/23/2019 11:20:9PM B5717 Benzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Tolkene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Tulene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Tulene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1,2-bichinco	EPA METHOD 300.0: ANIONS					Analyst	: smb
Gasoline Range Organics (GRO) ND 0.050 mg/L 1 1/22/2019 1:22:09 PM R5713 Surr: BFB 97.0 70-130 %Rec 1 1/22/2019 1:22:09 PM R5713 CPA METHOD 8015M/D: DIESEL RANGE Analyst: CLP Diesel Range Organics (DRO) ND 1.0 mg/L 1 1/23/2019 11:04:31 AM 42445 Motor Oil Range Organics (MRO) ND 5.0 mg/L 1 1/23/2019 11:04:31 AM 42445 Surr: DNOP 102 70-130 %Rec 1 1/23/2019 11:04:31 AM 42445 EPA METHOD 8260B: VOLATILES Analyst: CB Benzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Toluene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 L2.4-Trimethylbenzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1.2-Dibromoethane (EDC) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1.2-Dibrom	Chloride	140	5.0	mg/L	10	1/21/2019 10:13:38 PM	R57149
Surr: BFB 97.0 70-130 %Rec 1 1/22/2019 1:22:09 PM R5713 EPA METHOD 8015M/D: DIESEL RANGE Analyst: CLP Diesel Range Organics (DRO) ND 1.0 mg/L 1 1/23/2019 11:04:31 AM 42745 Motor Oil Range Organics (MRO) ND 1.02 70-130 %Rec 1 1/23/2019 11:04:31 AM 42745 Surr: DNOP 102 70-130 %Rec 1 1/23/2019 11:04:31 AM 42745 EPA METHOD 8260B: VOLATILES Analyst: KG Benzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Toluene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 L3.5-Trimethylbenzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 L3-Dichlorosethane (EDC) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 L3-Dichlorosethane (EDB) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717	EPA METHOD 8015D: GASOLINE RANGE					Analyst	AG
Surr: BFB 97.0 70-130 %Rec 1 1/22/2019 1:22:09 PM R5713 EPA METHOD 8015M/D: DIESEL RANGE Analyst: CLP Diesel Range Organics (DRO) ND 1.0 mg/L 1 1/23/2019 11:04:31 AM 42745 Motor Oil Range Organics (MRO) ND 1.02 70-130 %Rec 1 1/23/2019 11:04:31 AM 42745 Surr: DNOP 102 70-130 %Rec 1 1/23/2019 11:04:31 AM 42745 EPA METHOD 8260B: VOLATILES Analyst: KG Benzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Toluene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 L3.5-Trimethylbenzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 L3-Dichlorosethane (EDC) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 L3-Dichlorosethane (EDB) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717	Gasoline Range Organics (GRO)	ND	0.050	ma/l	1	, 1/22/2019 1·22·09 PM	R57171
EPA METHOD 8015M/D: DIESEL RANGE Analyst: CLP Diesel Range Organics (DRO) ND 1.0 mg/L 1 1/23/2019 11:04:31 AM 42745 Motor Oli Range Organics (MRO) ND 5.0 mg/L 1 1/23/2019 11:04:31 AM 42745 Surr: DNOP 10 0.20 7.03 %Rec 1 1/23/2019 11:04:31 AM 42745 EPA METHOD 8260B: VOLATILES Toluene 1 1/22/2019 122:09 PM 65717 Benzene ND 1.0 µg/L 1 1/22/2019 122:09 PM 65717 Toluene ND 1.0 µg/L 1 1/22/2019 122:09 PM 65717 Litybionzene ND 1.0 µg/L 1 1/22/2019 N2:209 PM 65717 1,2-4-Trimethylbenzene ND 1.0 µg/L 1 1/22/2019 N2:209 PM 65717 1,2-Dichoroethane (EDB) ND 1.0 µg/L 1 1/22/2019 N2:209 PM 65717 1-Methylnaphthalene ND 0.0 µg/L 1 1/22/2019 N2:209 PM 6				0			R57171
Diesel Range Organics (DRO) ND 1.0 mg/L 1 1/23/2019 11:04:31 AM 42745 Motor Oil Range Organics (MRO) ND 5.0 mg/L 1 1/23/2019 11:04:31 AM 42745 Surr: DNOP 102 70-130 %Rec 1 1/23/2019 11:04:31 AM 42745 EPA METHOD 8260B: VOLATILES		0110	10.00	,01100	·		
Motor Oil Range Organics (MRO) ND 5.0 mg/L 1 1/23/2019 11:04:31 AM 42745 Surr: DNOP 102 70-130 %Rec 1 1/23/2019 11:04:31 AM 42745 EPA METHOD 8260B: VOLATILES Falayse Falayse Falayse Falayse Benzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Toluene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Methyl tert-butyl ether (MTBE) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1,3,5-Trimethylbenzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1,2-Dichloroethane (EDC) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1.4ethylnaphthalene ND 4.0 µg/L 1 1/22/2019 1:22:09 PM B5717 2-Methylnaphthalene ND 4.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Bromodichlorometh			1.0	~~~~~/l	4	-	
Surr. DNOP 102 70-130 %Rec 1 1/23/2019 11:04:31 AM 42745 EPA METHOD 8260B: VOLATILES Analyst: Ag Benzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Toluene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Ethylbenzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Methyl tert-butyl ether (MTBE) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1.2.4-Trimethylbenzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1.2Dichoroethane (EDE) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Naphthalene ND 2.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Acetone ND 4.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Bromodichloromethane ND 1.0 µg/L 1 1/22/2019 1:22:09 PM <th5< td=""><td></td><td></td><td></td><td>0</td><td></td><td></td><td></td></th5<>				0			
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Toluene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Ethylbenzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Methyl tert-butyl ether (MTBE) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1,2,4-Trimethylbenzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1,2-Dichloroethane (EDC) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1,2-Dichloroethane (EDC) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1,2-Dibromoethane (EDB) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Naphthalene ND 2.0 µg/L 1 1/22/2019 1:22:09 PM B5717 2-Methylnaphthalene ND 4.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Acetone ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Bromodichloromethane ND <td>EPA METHOD 8260B: VOLATILES</td> <td></td> <td></td> <td></td> <td></td> <td>Analyst</td> <td>: AG</td>	EPA METHOD 8260B: VOLATILES					Analyst	: AG
EthylbenzeneND1.0μg/L11/22/2019 1:22:09 PMB5717Methyl tert-butyl ether (MTBE)ND1.0µg/L11/22/2019 1:22:09 PMB57171,2,4-TrimethylbenzeneND1.0µg/L11/22/2019 1:22:09 PMB57171,3,5-TrimethylbenzeneND1.0µg/L11/22/2019 1:22:09 PMB57171,2-Dichloroethane (EDC)ND1.0µg/L11/22/2019 1:22:09 PMB57171,2-Dichloroethane (EDB)ND1.0µg/L11/22/2019 1:22:09 PMB5717NaphthaleneND2.0µg/L11/22/2019 1:22:09 PMB57171-MethylnaphthaleneND4.0µg/L11/22/2019 1:22:09 PMB57172-MethylnaphthaleneND4.0µg/L11/22/2019 1:22:09 PMB57173-MethylnaphthaleneND1.0µg/L11/22/2019 1:22:09 PMB57173	Benzene	ND	1.0	10	1	1/22/2019 1:22:09 PM	B57171
Methyl tert-butyl ether (MTBE) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1,2,4-Trimethylbenzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1,2,5-Trimethylbenzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1,2-Dichloroethane (EDC) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1,2-Dibromoethane (EDB) ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Naphthalene ND 2.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1-Methylnaphthalene ND 4.0 µg/L 1 1/22/2019 1:22:09 PM B5717 2-Methylnaphthalene ND 4.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Acctone ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Bromodichloromethane ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 2-Butanone <t< td=""><td></td><td>ND</td><td>1.0</td><td>µg/L</td><td>1</td><td>1/22/2019 1:22:09 PM</td><td>B57171</td></t<>		ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
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1,2-Dibromoethane (EDB)ND1.0µg/L11/22/2019 1:22:09 PMB5717NaphthaleneND2.0µg/L11/22/2019 1:22:09 PMB57171-MethylnaphthaleneND4.0µg/L11/22/2019 1:22:09 PMB57172-MethylnaphthaleneND4.0µg/L11/22/2019 1:22:09 PMB5717AcetoneND10µg/L11/22/2019 1:22:09 PMB5717BromobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717BromodichloromethaneND1.0µg/L11/22/2019 1:22:09 PMB5717BromodishloromethaneND1.0µg/L11/22/2019 1:22:09 PMB5717BromotimaND1.0µg/L11/22/2019 1:22:09 PMB5717BromotimaneND3.0µg/L11/22/2019 1:22:09 PMB5717Carbon disulfideND3.0µg/L11/22/2019 1:22:09 PMB5717Carbon TetrachlorideND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorobhaneND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorobhaneND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorotolueneND3.0µg/L11/22/2019 1:22:09 PMB5717AchlorotolueneND1.0µg/L11/22/2019 1:22:09	1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
Naphthalene ND 2.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1-Methylnaphthalene ND 4.0 µg/L 1 1/22/2019 1:22:09 PM B5717 2-Methylnaphthalene ND 4.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Acetone ND 10 µg/L 1 1/22/2019 1:22:09 PM B5717 Bromobenzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Bromodichloromethane ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Bromoform ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Bromomethane ND 3.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Carbon disulfide ND 10 µg/L 1 1/22/2019 1:22:09 PM B5717 Chlorobenzene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 Chloroform ND 1.0 µg/L	1,2-Dichloroethane (EDC)	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
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2-MethylnaphthaleneND4.0µg/L11/22/2019 1:22:09 PMB5717AcetoneND10µg/L11/22/2019 1:22:09 PMB5717BromobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717BromodichloromethaneND1.0µg/L11/22/2019 1:22:09 PMB5717BromoformND1.0µg/L11/22/2019 1:22:09 PMB5717BromomethaneND1.0µg/L11/22/2019 1:22:09 PMB5717BromomethaneND3.0µg/L11/22/2019 1:22:09 PMB57172-ButanoneND10µg/L11/22/2019 1:22:09 PMB5717Carbon disulfideND10µg/L11/22/2019 1:22:09 PMB5717ChlorobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB57172-ChlorotolueneND3.0µg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0µg/L11/22/2019 1:22:09 PMB5717 <tr< td=""><td>Naphthalene</td><td>ND</td><td>2.0</td><td>µg/L</td><td>1</td><td>1/22/2019 1:22:09 PM</td><td>B57171</td></tr<>	Naphthalene	ND	2.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
AcetoneND10µg/L11/22/2019 1:22:09 PMB5717BromobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717BromodichloromethaneND1.0µg/L11/22/2019 1:22:09 PMB5717BromoformND1.0µg/L11/22/2019 1:22:09 PMB5717BromomethaneND3.0µg/L11/22/2019 1:22:09 PMB57172-ButanoneND10µg/L11/22/2019 1:22:09 PMB5717Carbon disulfideND10µg/L11/22/2019 1:22:09 PMB5717Carbon TetrachlorideND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND3.0µg/L11/22/2019 1:22:09 PMB5717ChlorotolueneND3.0µg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,3-DichloropropaneND1.0µg/L11/22/2019 1:22:09 PMB5717<	1-Methylnaphthalene	ND	4.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
BromobenzeneND1.0μg/L11/22/2019 1:22:09 PMB5717BromodichloromethaneND1.0μg/L11/22/2019 1:22:09 PMB5717BromoformND1.0μg/L11/22/2019 1:22:09 PMB5717BromomethaneND3.0μg/L11/22/2019 1:22:09 PMB57172-ButanoneND10μg/L11/22/2019 1:22:09 PMB5717Carbon disulfideND10μg/L11/22/2019 1:22:09 PMB5717Carbon TetrachlorideND1.0μg/L11/22/2019 1:22:09 PMB5717ChlorobenzeneND1.0μg/L11/22/2019 1:22:09 PMB5717ChlorothaneND1.0μg/L11/22/2019 1:22:09 PMB5717ChlorothaneND1.0μg/L11/22/2019 1:22:09 PMB5717ChlorothaneND1.0μg/L11/22/2019 1:22:09 PMB5717ChlorotolueneND3.0μg/L11/22/2019 1:22:09 PMB57172-ChlorotolueneND1.0μg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0μg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0μg/L11/22/2019 1:22:09 PMB5717cis-1,3-DichloropropeneND1.0μg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0μg/L11/22/2019 1:22:	2-Methylnaphthalene	ND	4.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
BromodichloromethaneND1.0µg/L11/22/2019 1:22:09 PMB5717BromoformND1.0µg/L11/22/2019 1:22:09 PMB5717BromomethaneND3.0µg/L11/22/2019 1:22:09 PMB57172-ButanoneND10µg/L11/22/2019 1:22:09 PMB5717Carbon disulfideND10µg/L11/22/2019 1:22:09 PMB5717Carbon TetrachlorideND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroethaneND2.0µg/L11/22/2019 1:22:09 PMB5717ChloroethaneND3.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroethaneND3.0µg/L11/22/2019 1:22:09 PMB5717ChloroethaneND3.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0µg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0µg/L11/22/2019 1:22:09 PMB5	Acetone	ND	10	µg/L	1	1/22/2019 1:22:09 PM	B57171
BromoformND1.0µg/L11/22/2019 1:22:09 PMB5717BromomethaneND3.0µg/L11/22/2019 1:22:09 PMB57172-ButanoneND10µg/L11/22/2019 1:22:09 PMB5717Carbon disulfideND10µg/L11/22/2019 1:22:09 PMB5717Carbon TetrachlorideND10µg/L11/22/2019 1:22:09 PMB5717ChlorobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorothaneND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorothaneND2.0µg/L11/22/2019 1:22:09 PMB5717ChlorothaneND3.0µg/L11/22/2019 1:22:09 PMB5717ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717chlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,3-DichloropropeneND1.0µg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0µg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0µg/L11/22/2019 1:22:09 PMB5717		ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
BromomethaneND3.0µg/L11/22/2019 1:22:09 PMB57172-ButanoneND10µg/L11/22/2019 1:22:09 PMB5717Carbon disulfideND10µg/L11/22/2019 1:22:09 PMB5717Carbon TetrachlorideND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroethaneND2.0µg/L11/22/2019 1:22:09 PMB5717ChloromethaneND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorotolueneND3.0µg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,3-DichloropropeneND1.0µg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0µg/L11/22/2019 1:22:09 PMB5717	Bromodichloromethane	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
2-ButanoneND10µg/L11/22/2019 1:22:09 PMB5717Carbon disulfideND10µg/L11/22/2019 1:22:09 PMB5717Carbon TetrachlorideND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroethaneND2.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChloromethaneND3.0µg/L11/22/2019 1:22:09 PMB57172-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0µg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0µg/L11/22/2019 1:22:09 PMB5717	Bromoform	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
Carbon disulfideND10µg/L11/22/2019 1:22:09 PMB5717Carbon TetrachlorideND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroethaneND2.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChloromethaneND3.0µg/L11/22/2019 1:22:09 PMB57172-ChlorotolueneND3.0µg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0µg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0µg/L11/22/2019 1:22:09 PMB5717	Bromomethane	ND	3.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
Carbon TetrachlorideND1.0µg/L11/22/2019 1:22:09 PMB5717ChlorobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroethaneND2.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChloromethaneND1.0µg/L11/22/2019 1:22:09 PMB5717ChloromethaneND3.0µg/L11/22/2019 1:22:09 PMB57172-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0µg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0µg/L11/22/2019 1:22:09 PMB5717	2-Butanone	ND	10	µg/L	1	1/22/2019 1:22:09 PM	B57171
ChlorobenzeneND1.0µg/L11/22/2019 1:22:09 PMB5717ChloroethaneND2.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChloromethaneND3.0µg/L11/22/2019 1:22:09 PMB57172-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,3-DichloropropeneND1.0µg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0µg/L11/22/2019 1:22:09 PMB5717	Carbon disulfide	ND	10	µg/L	1	1/22/2019 1:22:09 PM	B57171
ChloroethaneND2.0µg/L11/22/2019 1:22:09 PMB5717ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChloromethaneND3.0µg/L11/22/2019 1:22:09 PMB57172-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0µg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0µg/L11/22/2019 1:22:09 PMB5717	Carbon Tetrachloride	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
ChloroformND1.0µg/L11/22/2019 1:22:09 PMB5717ChloromethaneND3.0µg/L11/22/2019 1:22:09 PMB57172-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,3-DichloropropeneND1.0µg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0µg/L11/22/2019 1:22:09 PMB5717	Chlorobenzene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
ChloromethaneND3.0µg/L11/22/2019 1:22:09 PMB57172-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB57174-ChlorotolueneND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0µg/L11/22/2019 1:22:09 PMB5717cis-1,3-DichloropropeneND1.0µg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0µg/L11/22/2019 1:22:09 PMB5717	Chloroethane	ND	2.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
2-Chlorotoluene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 4-Chlorotoluene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 cis-1,2-DCE ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 cis-1,3-Dichloropropene ND 1.0 µg/L 1 1/22/2019 1:22:09 PM B5717 1,2-Dibromo-3-chloropropane ND 2.0 µg/L 1 1/22/2019 1:22:09 PM B5717	Chloroform	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
4-ChlorotolueneND1.0μg/L11/22/2019 1:22:09 PMB5717cis-1,2-DCEND1.0μg/L11/22/2019 1:22:09 PMB5717cis-1,3-DichloropropeneND1.0μg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0μg/L11/22/2019 1:22:09 PMB5717	Chloromethane	ND	3.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
cis-1,2-DCEND1.0μg/L11/22/2019 1:22:09 PMB5717cis-1,3-DichloropropeneND1.0μg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0μg/L11/22/2019 1:22:09 PMB5717	2-Chlorotoluene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
cis-1,3-DichloropropeneND1.0μg/L11/22/2019 1:22:09 PMB57171,2-Dibromo-3-chloropropaneND2.0μg/L11/22/2019 1:22:09 PMB5717	4-Chlorotoluene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,2-Dibromo-3-chloropropane ND 2.0 µg/L 1 1/22/2019 1:22:09 PM B5717	cis-1,2-DCE	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
	cis-1,3-Dichloropropene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
Dibromochloromethane ND 1.0 μg/L 1 1/22/2019 1:22:09 PM B5717	1,2-Dibromo-3-chloropropane	ND	2.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
	Dibromochloromethane	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171

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

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

в Analyte detected in the associated Method Blank

Е Value above quantitation range J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit

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S % Recovery outside of range due to dilution or matrix

Date Reported: 6/14/2019

CLIENT: Timberwolf Environmental		Client Sa	mplo I	D• 1/1	W2	
			-		w 5 17/2019 12:15:00 PM	
U						
Lab ID: 1901789-002	Matrix: AQUEOUS	Kecel	ved Dat	e: 1/1	19/2019 11:10:00 AM	
Analyses	Result	RL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	AG
Dibromomethane	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,2-Dichlorobenzene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,3-Dichlorobenzene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,4-Dichlorobenzene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
Dichlorodifluoromethane	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,1-Dichloroethane	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,1-Dichloroethene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,2-Dichloropropane	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,3-Dichloropropane	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
2,2-Dichloropropane	ND	2.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,1-Dichloropropene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
Hexachlorobutadiene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
2-Hexanone	ND	10	µg/L	1	1/22/2019 1:22:09 PM	B57171
Isopropylbenzene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
4-Isopropyltoluene 4-Methyl-2-pentanone	ND ND	1.0 10	µg/L	1 1	1/22/2019 1:22:09 PM 1/22/2019 1:22:09 PM	B57171 B57171
Methylene Chloride	ND	3.0	μg/L μg/L	1	1/22/2019 1:22:09 PM	B57171 B57171
n-Butylbenzene	ND	3.0	µg/∟ µg/L	1	1/22/2019 1:22:09 PM	B57171
n-Propylbenzene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
sec-Butylbenzene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
Styrene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
tert-Butylbenzene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	1/22/2019 1:22:09 PM	B57171
trans-1,2-DCE	ND	1.0	μg/L	1	1/22/2019 1:22:09 PM	B57171
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,1,1-Trichloroethane	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,1,2-Trichloroethane	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
Trichloroethene (TCE)	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
Trichlorofluoromethane	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
1,2,3-Trichloropropane	ND	2.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
Vinyl chloride	ND	1.0	µg/L	1	1/22/2019 1:22:09 PM	B57171
Xylenes, Total	ND	1.5	µg/L	1	1/22/2019 1:22:09 PM	B57171
Surr: 1,2-Dichloroethane-d4		0-130	%Rec	1	1/22/2019 1:22:09 PM	B57171
Surr: 4-Bromofluorobenzene		0-130	%Rec	1	1/22/2019 1:22:09 PM	B57171
Surr: Dibromofluoromethane	111 7	0-130	%Rec	1	1/22/2019 1:22:09 PM	B57171

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

Hall Environmental Analysis Laboratory, Inc.

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

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Hall Environmental Analysi	all Environmental Analysis Laboratory, Inc				Date Reported: 6/14/2019						
CLIENT: Timberwolf Environmental		Clien	t Sample II	D: M	W3						
Project: Kaufman No1		Col	lection Dat	e: 1/1	17/2019 12:15:00 PM						
Lab ID: 1901789-002	Matrix: AQUEOUS	Re	eceived Dat	e: 1/1	19/2019 11:10:00 AM						
Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch					
EPA METHOD 8260B: VOLATILES					Analys	t: AG					
Surr: Toluene-d8	101	70-130	%Rec	1	1/22/2019 1:22:09 PM	B57171					

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
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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Hall Environmental Analysis Laboratory Inc

Date Reported: 6/14/2019

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result RL	Qual Units	DF Date Analyzed	B
Lab ID: 190178	39-003 Matri	x: AQUEOUS	Received Date	e: 1/19/2019 11:10:00 AM	
Project: Kaufma	an No1		Collection Date	e: 1/17/2019 1:30:00 PM	
CLIENT: Timber	wolf Environmental	C	lient Sample II	D: MW4	

Analyses	Result	RL	Qual U	nits I)F	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	smb
Chloride	140	5.0	m	ng/L	10	1/21/2019 10:39:21 PM	R57149
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	AG
Gasoline Range Organics (GRO)	ND	0.050	m	ig/L	1	1/22/2019 2:47:49 PM	R57171
Surr: BFB	97.8	70-130		•	1	1/22/2019 2:47:49 PM	R57171
EPA METHOD 8015M/D: DIESEL RANGE						Analyst:	-
Diesel Range Organics (DRO)	ND	1.0		0	1	1/23/2019 11:26:23 AM	
Motor Oil Range Organics (MRO)	ND	5.0		0	1	1/23/2019 11:26:23 AM	
Surr: DNOP	106	70-130	%	Rec	1	1/23/2019 11:26:23 AM	42745
EPA METHOD 8260B: VOLATILES						Analyst:	AG
Benzene	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B57171
Toluene	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717
Ethylbenzene	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717
Methyl tert-butyl ether (MTBE)	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
1,2,4-Trimethylbenzene	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
1,3,5-Trimethylbenzene	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717
1,2-Dichloroethane (EDC)	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
1,2-Dibromoethane (EDB)	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
Naphthalene	ND	2.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
1-Methylnaphthalene	ND	4.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717
2-Methylnaphthalene	ND	4.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717
Acetone	ND	10	μ	g/L	1	1/22/2019 2:47:49 PM	B5717
Bromobenzene	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
Bromodichloromethane	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
Bromoform	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
Bromomethane	ND	3.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
2-Butanone	ND	10	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
Carbon disulfide	ND	10	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
Carbon Tetrachloride	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
Chlorobenzene	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
Chloroethane	ND	2.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
Chloroform	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
Chloromethane	ND	3.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
2-Chlorotoluene	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
4-Chlorotoluene	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717
cis-1,2-DCE	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717
cis-1,3-Dichloropropene	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
1,2-Dibromo-3-chloropropane	ND	2.0	μ	g/L	1	1/22/2019 2:47:49 PM	B5717 ⁻
Dibromochloromethane	ND	1.0	μ	g/L	1	1/22/2019 2:47:49 PM	B57171

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 rangeJ Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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S % Recovery outside of range due to dilution or matrix

Hall Environmental Analys	is Laboratory, Inc	2.				Lab Order 1901789 Date Reported: 6/14/20	19
CLIENT: Timberwolf EnvironmentalProject: Kaufman No1Lab ID: 1901789-003	Matrix: AQUEOUS	(Collect		e: 1/1	W4 7/2019 1:30:00 PM 9/2019 11:10:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst	AG
Dibromomethane	ND	1.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
1,2-Dichlorobenzene	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
Dichlorodifluoromethane	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
1,1-Dichloroethane	ND	1.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
1,1-Dichloroethene	ND	1.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
1,2-Dichloropropane	ND	1.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
1,3-Dichloropropane	ND	1.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
2,2-Dichloropropane	ND	2.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
1,1-Dichloropropene	ND	1.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
Hexachlorobutadiene	ND	1.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
2-Hexanone	ND	10		µg/L	1	1/22/2019 2:47:49 PM	B5717
Isopropylbenzene	ND	1.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
4-Isopropyltoluene	ND	1.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
4-Methyl-2-pentanone	ND	10		µg/L	1	1/22/2019 2:47:49 PM	B5717
Methylene Chloride	ND	3.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
n-Butylbenzene	ND	3.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
n-Propylbenzene	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
sec-Butylbenzene	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
Styrene	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
tert-Butylbenzene	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
1,1,1,2-Tetrachloroethane	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
1,1,2,2-Tetrachloroethane	ND	2.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
Tetrachloroethene (PCE)	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
trans-1,2-DCE	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
trans-1,3-Dichloropropene	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
1,2,3-Trichlorobenzene	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
1,2,4-Trichlorobenzene	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
1,1,1-Trichloroethane	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
1,1,2-Trichloroethane	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
Trichloroethene (TCE)	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/22/2019 2:47:49 PM	B5717
Vinyl chloride	ND	1.0		μg/L	1	1/22/2019 2:47:49 PM	B5717
Xylenes, Total	ND	1.5		μg/L	1	1/22/2019 2:47:49 PM	B5717
Surr: 1,2-Dichloroethane-d4		70-130		%Rec	1	1/22/2019 2:47:49 PM	B5717
Surr: 4-Bromofluorobenzene		70-130		%Rec	1	1/22/2019 2:47:49 PM	B5717
Surr: Dibromofluoromethane		70-130		%Rec	1	1/22/2019 2:47:49 PM	B5717

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

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 В Analyte detected in the associated Method Blank

Е Value above quantitation range J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysi		Date Reported: 6/14/2019						
CLIENT: Timberwolf Environmental		Client Samp	le ID: M	IW4				
Project: Kaufman No1		Collection	Date: 1/	17/2019 1:30:00 PM				
Lab ID: 1901789-003	Matrix: AQUEOUS	Received	Date: 1/	19/2019 11:10:00 AM				
Analyses	Result	RL Qual Un	its DF	F Date Analyzed	Batch			
EPA METHOD 8260B: VOLATILES				Analys	t: AG			
Surr: Toluene-d8	104 7	70-130 %F	Rec 1	1/22/2019 2:47:49 PM	B57171			

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

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

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Hall Environmental Analysis Laboratory Inc

Analytical Report

Lab Order 1901789

Date Reported: 6/14/2019

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CLIENT:	Timberwolf Environmental		С	lient Sample II	D: MW5	
Project:	Kaufman No1			Collection Dat	e: 1/17/2019 2:45:00 PM	
Lab ID:	1901789-004	Matrix: AQUEOUS		Received Dat	e: 1/19/2019 11:10:00 AM	
A		D14	ы	Oral Units	DE D-4- Ameland	п.

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	130	5.0	mg/L	10	1/21/2019 11:05:04 PM	R57149
EPA METHOD 8015D: GASOLINE RANGE					Analyst	AG
Gasoline Range Organics (GRO)	0.32	0.050	mg/L	1	1/22/2019 3:16:21 PM	R5717
Surr: BFB	95.8	70-130	%Rec	1	1/22/2019 3:16:21 PM	R5717
EPA METHOD 8015M/D: DIESEL RANGE					Analyst	CLP
Diesel Range Organics (DRO)	ND	1.0	mg/L	1	1/23/2019 11:48:26 AM	42745
Motor Oil Range Organics (MRO)	ND	5.0	mg/L	1	1/23/2019 11:48:26 AM	42745
Surr: DNOP	107	70-130	%Rec	1	1/23/2019 11:48:26 AM	42745
EPA METHOD 8260B: VOLATILES					Analyst	: AG
Benzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Toluene	ND	1.0	μg/L	1	1/22/2019 3:16:21 PM	B5717
Ethylbenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1	1/22/2019 3:16:21 PM	B5717
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1,2-Dichloroethane (EDC)	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Naphthalene	ND	2.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1-Methylnaphthalene	ND	4.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
2-Methylnaphthalene	ND	4.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Acetone	ND	10	µg/L	1	1/22/2019 3:16:21 PM	B5717
Bromobenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Bromodichloromethane	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Bromoform	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Bromomethane	ND	3.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
2-Butanone	ND	10	µg/L	1	1/22/2019 3:16:21 PM	B5717
Carbon disulfide	ND	10	µg/L	1	1/22/2019 3:16:21 PM	B5717
Carbon Tetrachloride	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Chlorobenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Chloroethane	ND	2.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Chloroform	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Chloromethane	ND	3.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
2-Chlorotoluene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
4-Chlorotoluene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
cis-1,2-DCE	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
cis-1,3-Dichloropropene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1,2-Dibromo-3-chloropropane	ND	2.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Dibromochloromethane	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717

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

JAnalyte detected below quantitation limitsPSample pH Not In Range

P Sample pH Not l RL Reporting Limit

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S % Recovery outside of range due to dilution or matrix

Date Reported: 6/14/2019

CLIENT: Timberwolf EnvironmentalProject: Kaufman No1Lab ID: 1901789-004	Matrix: AQUEOUS	W5 7/2019 2:45:00 PM 9/2019 11:10:00 AM	ſ			
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: AG
Dibromomethane	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1,2-Dichlorobenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1,3-Dichlorobenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1,4-Dichlorobenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Dichlorodifluoromethane	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1,1-Dichloroethane	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717 ⁻
1,1-Dichloroethene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717 ⁻
1,2-Dichloropropane	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717 ⁻
1,3-Dichloropropane	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717 ⁻
2,2-Dichloropropane	ND	2.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1,1-Dichloropropene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717 ⁻
Hexachlorobutadiene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717 ⁻
2-Hexanone	ND	10	µg/L	1	1/22/2019 3:16:21 PM	B5717
Isopropylbenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
4-Isopropyltoluene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
4-Methyl-2-pentanone	ND	10	µg/L	1	1/22/2019 3:16:21 PM	B5717
Methylene Chloride	ND	3.0	µg/L	1	1/22/2019 3:16:21 PM	B5717 [,]
n-Butylbenzene	ND	3.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
n-Propylbenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
sec-Butylbenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Styrene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
tert-Butylbenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717 ⁻
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717 ⁻
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	1/22/2019 3:16:21 PM	B5717 ⁻
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	1/22/2019 3:16:21 PM	B5717 ⁻
trans-1,2-DCE	ND	1.0	μg/L	1	1/22/2019 3:16:21 PM	B5717 ⁻
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	1/22/2019 3:16:21 PM	B5717 ⁻
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	1/22/2019 3:16:21 PM	B5717
1,1,1-Trichloroethane	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1,1,2-Trichloroethane	ND	1.0	μg/L	1	1/22/2019 3:16:21 PM	B5717
Trichloroethene (TCE)	ND	1.0	μg/L	1	1/22/2019 3:16:21 PM	B5717
Trichlorofluoromethane	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
1,2,3-Trichloropropane	ND	2.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Vinyl chloride	ND	1.0	µg/L	1	1/22/2019 3:16:21 PM	B5717
Xylenes, Total	ND	1.5	µg/L	1	1/22/2019 3:16:21 PM	B5717
Surr: 1,2-Dichloroethane-d4		70-130	~9/- %Rec	1	1/22/2019 3:16:21 PM	B5717
Surr: 4-Bromofluorobenzene		70-130	%Rec	1	1/22/2019 3:16:21 PM	B5717
Surr: Dibromofluoromethane		70-130	%Rec	1	1/22/2019 3:16:21 PM	B5717

Hall Environmental Analysis Laboratory, Inc.

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits Sample pH Not In Range

Р

RL Reporting Limit

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S % Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.			Date Reported: 6/14/2019							
CLIENT: Timberwolf Environmental		Client	Sample I	D: M	W5					
Project: Kaufman No1		Collection Date: 1/17/2019 2:45:00 PM								
Lab ID: 1901789-004	Matrix: AQUEOUS	Rec	Received Date: 1/19/2019 11:10:00 AM							
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch				
EPA METHOD 8260B: VOLATILES					Analys	st: AG				
Surr: Toluene-d8	99.5	70-130	%Rec	1	1/22/2019 3:16:21 PN	I B57171				

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
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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Hall Environmental Analysis Laboratory Inc

Analytical Report

Lab Order 1901789

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/14/2019

Lab ID: 1901789-005 Matrix: A	AQUEOUS Received Date: 1/19/2019 11:10:00 AM
Project: Kaufman No1	Collection Date: 1/18/2019 1:35:00 PM
CLIENT: Timberwolf Environmental	Client Sample ID: MW6

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	smb
Chloride	180	5.0	mg/L	10	1/21/2019 11:30:46 PM	R57149
EPA METHOD 8015D: GASOLINE RANGE					Analyst	AG
Gasoline Range Organics (GRO)	1.1	0.050	mg/L	1	1/22/2019 3:44:54 PM	R57171
Surr: BFB	95.5	70-130	%Rec	1	1/22/2019 3:44:54 PM	R57171
EPA METHOD 8015M/D: DIESEL RANGE					Analyst	
		1.0		4		
Diesel Range Organics (DRO)	ND ND	1.0 5.0	mg/L	1	1/23/2019 12:10:26 PM	
Motor Oil Range Organics (MRO) Surr: DNOP	103	5.0 70-130	mg/L %Rec	1 1	1/23/2019 12:10:26 PM	
	103	70-130	%Rec	I	1/23/2019 12:10:26 PM	
EPA METHOD 8260B: VOLATILES					Analyst	AG
Benzene	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
Toluene	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
Ethylbenzene	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1	1/22/2019 3:44:54 PM	B57171
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
1,2-Dichloroethane (EDC)	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
Naphthalene	ND	2.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
1-Methylnaphthalene	ND	4.0	µg/L	1	1/22/2019 3:44:54 PM	B5717
2-Methylnaphthalene	ND	4.0	µg/L	1	1/22/2019 3:44:54 PM	B5717
Acetone	ND	10	µg/L	1	1/22/2019 3:44:54 PM	B57171
Bromobenzene	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
Bromodichloromethane	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
Bromoform	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
Bromomethane	ND	3.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
2-Butanone	ND	10	µg/L	1	1/22/2019 3:44:54 PM	B57171
Carbon disulfide	ND	10	µg/L	1	1/22/2019 3:44:54 PM	B57171
Carbon Tetrachloride	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
Chlorobenzene	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
Chloroethane	ND	2.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
Chloroform	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
Chloromethane	ND	3.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
2-Chlorotoluene	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
4-Chlorotoluene	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
cis-1,2-DCE	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B5717
cis-1,3-Dichloropropene	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
1,2-Dibromo-3-chloropropane	ND	2.0	µg/L	1	1/22/2019 3:44:54 PM	B57171
Dibromochloromethane	ND	1.0	µg/L	1	1/22/2019 3:44:54 PM	B57171

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 BlankE Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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S % Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.						Lab Order 1901789 Date Reported: 6/14/2019			
CLIENT: Timberwolf Environmental Project: Kaufman No1 Lab ID: 1901789-005	al Client Sample ID: MW6 Collection Date: 1/18/2019 1:35:0 Matrix: AQUEOUS Received Date: 1/19/2019 11:10								
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 8260B: VOLATILES						Analyst	AG		
Dibromomethane	ND	1.0		µg/L	1	1/22/2019 3:44:54 PM	B5717		
1,2-Dichlorobenzene	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
1,3-Dichlorobenzene	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
1,4-Dichlorobenzene	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
Dichlorodifluoromethane	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
1,1-Dichloroethane	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
1,1-Dichloroethene	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
1,2-Dichloropropane	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
1,3-Dichloropropane	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
2,2-Dichloropropane	ND	2.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
1,1-Dichloropropene	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
Hexachlorobutadiene	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
2-Hexanone	ND	10		μg/L	1	1/22/2019 3:44:54 PM	B5717		
Isopropylbenzene	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
4-Isopropyltoluene	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
4-Methyl-2-pentanone	ND	10		μg/L	1	1/22/2019 3:44:54 PM	B5717		
Methylene Chloride	ND	3.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
n-Butylbenzene	ND	3.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
n-Propylbenzene	ND	1.0		µg/L	1	1/22/2019 3:44:54 PM	B5717		
sec-Butylbenzene	ND	1.0		µg/L	1	1/22/2019 3:44:54 PM	B5717		
Styrene	ND	1.0		µg/L	1	1/22/2019 3:44:54 PM	B5717		
tert-Butylbenzene	2.2	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
1,1,1,2-Tetrachloroethane	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/22/2019 3:44:54 PM	B5717		
Tetrachloroethene (PCE)	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
trans-1,2-DCE	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/22/2019 3:44:54 PM	B5717		
1,2,3-Trichlorobenzene	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
1,2,4-Trichlorobenzene	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
1,1,1-Trichloroethane	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/22/2019 3:44:54 PM	B5717		
Trichloroethene (TCE)	ND	1.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
Trichlorofluoromethane	ND	1.0		µg/L	1	1/22/2019 3:44:54 PM	B5717		
1,2,3-Trichloropropane	ND	2.0		μg/L	1	1/22/2019 3:44:54 PM	B5717		
Vinyl chloride	ND	1.0		µg/L	1	1/22/2019 3:44:54 PM	B5717		
Xylenes, Total	ND	1.5		µg/L	1	1/22/2019 3:44:54 PM	B5717		
Surr: 1,2-Dichloroethane-d4		70-130		%Rec	1	1/22/2019 3:44:54 PM	B5717		
Surr: 4-Bromofluorobenzene		70-130		%Rec	1	1/22/2019 3:44:54 PM	B5717		
Surr: Dibromofluoromethane		70-130		%Rec	1	1/22/2019 3:44:54 PM	B5717		
	103	10-100		/01100		1/22/2010 0.44.04 F M	5571		

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

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 В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits Р

Sample pH Not In Range RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.			Date Reported: 6/14/2019								
CLIENT: Timberwolf Environmental		Clie	nt Sample II	D: M	W6						
Project: Kaufman No1		Collection Date: 1/18/2019 1:35:00 PM									
Lab ID: 1901789-005	Matrix: AQUEOUS	R	eceived Dat	e: 1/1	19/2019 11:10:00 AM						
Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch					
EPA METHOD 8260B: VOLATILES					Analys	t: AG					
Surr: Toluene-d8	96.1	70-130	%Rec	1	1/22/2019 3:44:54 PM	B57171					

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
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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Hall Environmental Analysis Laboratory Inc

Date Reported: 6/14/2019

CLIENT: Timberwolf Environmental		Cl	ient Sa	mple ID	: MV	W1	
Project: Kaufman No1		(Collect	ion Date	: 1/1	8/2019 3:15:00 PM	
Lab ID: 1901789-006	Matrix: AQUEC	OUS	Receiv	ved Date	: 1/1	9/2019 11:10:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	smb
Fluoride	ND	1.0		mg/L	10	1/22/2019 12:22:13 AM	R57149
Chloride	130	5.0		mg/L	10	1/22/2019 12:22:13 AM	R57149
Nitrogen, Nitrite (As N)	ND	1.0	Н	mg/L	10	1/22/2019 12:22:13 AM	R57149
Bromide	ND	1.0		mg/L	10	1/22/2019 12:22:13 AM	R57149
Nitrogen, Nitrate (As N)	ND	1.0	Н	mg/L	10	1/22/2019 12:22:13 AM	R57149
Phosphorus, Orthophosphate (As P)	ND	5.0	Н	mg/L	10	1/22/2019 12:22:13 AM	R57149
Sulfate	1700	50	*	mg/L	100	1/22/2019 12:35:04 AM	R57149
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	MRA
Conductivity	3600	5.0		µmhos/c	1	1/21/2019 9:31:21 PM	R57160
SM2540C MOD: TOTAL DISSOLVED SOL	IDS					Analyst:	KS
Total Dissolved Solids	3130	40.0	*D	mg/L	1	1/23/2019 3:44:00 PM	42739
EPA METHOD 7470: MERCURY						Analyst:	pmf
Mercury	ND	0.00020		mg/L	1	1/23/2019 5:51:24 PM	42731
EPA 6010B: TOTAL RECOVERABLE ME	TALS					Analyst:	rde
Arsenic	ND	0.020		mg/L	1	1/29/2019 2:53:21 PM	42806
Barium	0.079	0.020		mg/L	1	1/28/2019 5:31:55 PM	42806
Cadmium	ND	0.0020		mg/L	1	1/28/2019 5:31:55 PM	42806
Calcium	430	5.0		mg/L	5	1/28/2019 6:52:17 PM	42806
Chromium	ND	0.0060		mg/L	1	1/28/2019 5:31:55 PM	42806
Lead	ND	0.0050		mg/L	1	1/28/2019 6:47:08 PM	42806
Magnesium	88	1.0		mg/L	1	1/28/2019 5:31:55 PM	42806
Potassium	3.3	1.0		mg/L	1	1/28/2019 5:31:55 PM	42806
Selenium	ND	0.050		mg/L	1	1/28/2019 5:31:55 PM	42806
Silver	0.0068	0.0050		mg/L	1	1/28/2019 5:31:55 PM	42806
Sodium	370	5.0		mg/L	5	1/28/2019 6:52:17 PM	42806
EPA METHOD 8015D: GASOLINE RANG						Analyst:	AG
Gasoline Range Organics (GRO)	2.4	0.050		mg/L	1	1/22/2019 4:13:29 PM	R57171
Surr: BFB	98.5	70-130		%Rec	1	1/22/2019 4:13:29 PM	R57171
EPA METHOD 8015M/D: DIESEL RANGE						Analyst:	CLP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	1/23/2019 12:32:30 PM	42745
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	1/23/2019 12:32:30 PM	42745
Surr: DNOP	111	70-130		%Rec	1	1/23/2019 12:32:30 PM	42745
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	DAM
Acenaphthene	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755
Acenaphthylene	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755
Aniline	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755

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

* Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix

Not Detected at the Reporting Limit

Qualifiers:

Н

ND

B Analyte detected in the associated Method Blank

E Value above quantitation rangeJ Analyte detected below quantitation

J Analyte detected below quantitation limitsP Sample pH Not In Range

I Sampic

PQL Practical Quanitative Limit S % Recovery outside of range due to dilution or matrix

Holding times for preparation or analysis exceeded

Hall Environmental Analysis Laboratory, Inc.

RL Reporting Limit

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Date Reported: 6/14/2019

Lab ID: Analyses	Kaufman No1 1901789-006 HOD 8270C: SEMIVOLATILES e	Matrix: AQUEOUS Result		ved Dat		18/2019 3:15:00 PM 19/2019 11:10:00 AM	
Lab ID: Analyses EPA METH Anthracen Azobenzer	OD 8270C: SEMIVOLATILES				e: 1/1	19/2019 11:10:00 AM	
EPA METH Anthracen Azobenzer		Result	RL Qual				
Anthracen Azobenzei				Units	DF	Date Analyzed	Batch
Azobenzei	e					Analyst	: DAM
Azobenzei		ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
	ne	ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
()		ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
Benzo(a)p		ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
	uoranthene	ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
Benzo(g,h		ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
	uoranthene	ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
Benzoic a		ND	20	µg/L	1	1/28/2019 4:34:16 PM	42755
Benzyl alc		ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
	roethoxy)methane	ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
	roethyl)ether	ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
	roisopropyl)ether	ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
•	lhexyl)phthalate	ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
	henyl phenyl ether	ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
•	yl phthalate	ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
Carbazole		ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
	B-methylphenol	ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
4-Chloroar		ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
	aphthalene	ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
2-Chloroph		ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
	nenyl phenyl ether	ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
Chrysene		ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
Di-n-butyl	phthalate	ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
Di-n-octyl		ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
	n)anthracene	ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
Dibenzofu		ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
1,2-Dichlo		ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
1,3-Dichlo		ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
1,4-Dichlo		ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
	probenzidine	ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
Diethyl phi		ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
Dimethyl p		ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
2,4-Dichlo		ND	20	μg/L	1	1/28/2019 4:34:16 PM	42755
2,4-Dimeth		ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
	-2-methylphenol	ND	20	μg/L	1	1/28/2019 4:34:16 PM	42755
2,4-Dinitro		ND	20	µg/L	1	1/28/2019 4:34:16 PM	42755
2,4-Dinitro	•	ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755
2,4 Dinitro		ND	10	μg/L	1	1/28/2019 4:34:16 PM	42755
Fluoranthe		ND	10	µg/L	1	1/28/2019 4:34:16 PM	42755

Hall Environmental Analysis Laboratory, Inc.

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

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

D Sample Diluted Due to Matrix

Н 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

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range

J Analyte detected below quantitation limits Р

Sample pH Not In Range RL Reporting Limit

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Date Reported: 6/14/2019

CLIENT: Timberwolf Environmental Project: Kaufman No1			Client Sample ID: MW1 Collection Date: 1/18/2019 3:15:00 PM							
Lab ID: 1901789-006	Matrix: AQUEOU	JS	Recei	ved Dat	e: 1/19/2019 11:10:00 AM					
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch			
EPA METHOD 8270C: SEMIVOLATILES						Analyst	DAM			
Fluorene	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
Hexachlorobenzene	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
Hexachlorobutadiene	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
Hexachlorocyclopentadiene	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
Hexachloroethane	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
Isophorone	ND	10		μg/L	1	1/28/2019 4:34:16 PM	42755			
1-Methylnaphthalene	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
2-Methylnaphthalene	ND	10		μg/L	1	1/28/2019 4:34:16 PM	42755			
2-Methylphenol	ND	10		μg/L	1	1/28/2019 4:34:16 PM	42755			
3+4-Methylphenol	ND	10		μg/L	1	1/28/2019 4:34:16 PM	42755			
N-Nitrosodi-n-propylamine	ND	10		μg/L	1	1/28/2019 4:34:16 PM	42755			
N-Nitrosodimethylamine	ND	10		μg/L	1	1/28/2019 4:34:16 PM	42755			
N-Nitrosodiphenylamine	ND	10		μg/L	1	1/28/2019 4:34:16 PM	42755			
Naphthalene	ND	10		μg/L	1	1/28/2019 4:34:16 PM	42755			
2-Nitroaniline	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
3-Nitroaniline	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
4-Nitroaniline	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
Nitrobenzene	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
2-Nitrophenol	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
4-Nitrophenol	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
Pentachlorophenol	ND	20		µg/L	1	1/28/2019 4:34:16 PM	42755			
Phenanthrene	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
Phenol	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
Pyrene	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
Pyridine	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
1,2,4-Trichlorobenzene	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
2,4,5-Trichlorophenol	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
2,4,6-Trichlorophenol	ND	10		µg/L	1	1/28/2019 4:34:16 PM	42755			
Surr: 2-Fluorophenol	32.4	15-74.1		⊮9/⊑ %Rec	1	1/28/2019 4:34:16 PM	42755			
Surr: Phenol-d5	30.0	15-59.8		%Rec	1	1/28/2019 4:34:16 PM	42755			
Surr: 2,4,6-Tribromophenol		22.1-112		%Rec	1	1/28/2019 4:34:16 PM	42755			
Surr: Nitrobenzene-d5	47.5	33.2-94		%Rec	1	1/28/2019 4:34:16 PM	42755			
Surr: 2-Fluorobiphenyl	39.3	34-90.9		%Rec	1	1/28/2019 4:34:16 PM	42755			
Surr: 4-Terphenyl-d14	44.3	15-149		%Rec	1	1/28/2019 4:34:16 PM	42755			
EPA METHOD 8260B: VOLATILES	- 1 .0	10-140		/01/00	ı	Analyst				
Benzene	74	1.0		µg/L	1	1/22/2019 4:13:29 PM	B57171			
Toluene	350	10		µg/∟ µg/L	10	1/23/2019 4:08:15 PM	R57206			
Ethylbenzene	27	1.0		µg/∟ µg/L	1	1/22/2019 4:13:29 PM	B57171			
Refer to the QC Summary report and	l sample login checkli	st for fla	gged Q	QC data	and p	reservation information				

Hall Environmental Analysis Laboratory, Inc.

Е Value above quantitation range

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Sample Diluted Due to Matrix

PQL Practical Quanitative Limit

*

D

Qualifiers:

В Analyte detected in the associated Method Blank

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit

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S % Recovery outside of range due to dilution or matrix

Value exceeds Maximum Contaminant Level.

Date Reported: 6/14/2019

CLIENT: Timberwolf Environmental		CI	iont C.	mnla T	D . \//	W/1				
				ample I						
Project: Kaufman No1	Collection Date: 1/18/2019 3:15:00 PM									
Lab ID: 1901789-006	Matrix: AQUEOUS		Recei	ved Dat	te: 1/1	9/2019 11:10:00 AM				
Analyses	Result	RL	RL Qual Units		DF	Date Analyzed	Batch			
EPA METHOD 8260B: VOLATILES						Analyst	: AG			
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/22/2019 4:13:29 PM	B5717 ²			
1,2,4-Trimethylbenzene	32	1.0		µg/L	1	1/22/2019 4:13:29 PM	B57171			
1,3,5-Trimethylbenzene	15	1.0		µg/L	1	1/22/2019 4:13:29 PM	B5717			
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/22/2019 4:13:29 PM	B5717			
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/22/2019 4:13:29 PM	B57171			
Naphthalene	3.2	2.0		µg/L	1	1/22/2019 4:13:29 PM	B5717			
1-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2019 4:13:29 PM	B57171			
2-Methylnaphthalene	ND	4.0		µg/L	1	1/22/2019 4:13:29 PM	B57171			
Acetone	ND	10		µg/L	1	1/22/2019 4:13:29 PM	B5717			
Bromobenzene	ND	1.0		µg/L	1	1/22/2019 4:13:29 PM	B5717 [,]			
Bromodichloromethane	ND	1.0		µg/L	1	1/22/2019 4:13:29 PM	B5717 [,]			
Bromoform	ND	1.0		µg/L	1	1/22/2019 4:13:29 PM	B5717 [,]			
Bromomethane	ND	3.0		µg/L	1	1/22/2019 4:13:29 PM	B5717 [,]			
2-Butanone	ND	10		µg/L	1	1/22/2019 4:13:29 PM	B5717 [,]			
Carbon disulfide	ND	10		µg/L	1	1/22/2019 4:13:29 PM	B5717			
Carbon Tetrachloride	ND	1.0		µg/L	1	1/22/2019 4:13:29 PM	B57171			
Chlorobenzene	ND	1.0		µg/L	1	1/22/2019 4:13:29 PM	B5717 ⁻			
Chloroethane	ND	2.0		µg/L	1	1/22/2019 4:13:29 PM	B5717 [.]			
Chloroform	ND	1.0		µg/L	1	1/22/2019 4:13:29 PM	B5717 [.]			
Chloromethane	ND	3.0		µg/L	1	1/22/2019 4:13:29 PM	B5717 [.]			
2-Chlorotoluene	ND	1.0		µg/L	1	1/22/2019 4:13:29 PM	B5717 [,]			
4-Chlorotoluene	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B57171			
cis-1,2-DCE	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717 [,]			
cis-1,3-Dichloropropene	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717 [,]			
1,2-Dibromo-3-chloropropane	ND	2.0		μg/L	1	1/22/2019 4:13:29 PM	B5717 [,]			
Dibromochloromethane	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717 [,]			
Dibromomethane	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B57171			
1,2-Dichlorobenzene	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717 [,]			
1,3-Dichlorobenzene	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717 ⁻			
1,4-Dichlorobenzene	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717 ⁻			
Dichlorodifluoromethane	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717 [.]			
1,1-Dichloroethane	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717			
1,1-Dichloroethene	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717 [,]			
1,2-Dichloropropane	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717 ⁻			
1,3-Dichloropropane	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717			
2,2-Dichloropropane	ND	2.0		μg/L	1	1/22/2019 4:13:29 PM	B5717			
1,1-Dichloropropene	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717			
Hexachlorobutadiene	ND	1.0		μg/L	1	1/22/2019 4:13:29 PM	B5717			
2-Hexanone	ND	10		μg/L	1	1/22/2019 4:13:29 PM	B57171			

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

Hall Environmental Analysis Laboratory, Inc.

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 limitsP Sample pH Not In Range

P Sample pH Not In Range RL Reporting Limit

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iit

Date Reported: 6/14/2019

CLIENT:Timberwolf EnvironmentalProject:Kaufman No1Lab ID:1901789-006	Client Sample ID: MW1Collection Date: 1/18/2019 3:15:00 PMMatrix: AQUEOUSReceived Date: 1/19/2019 11:10:00 AM								
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch			
EPA METHOD 8260B: VOLATILES					Analyst	AG			
Isopropylbenzene	3.1	1.0	µg/L	1	1/22/2019 4:13:29 PM	B57171			
4-Isopropyltoluene	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
4-Methyl-2-pentanone	ND	10	μg/L	1	1/22/2019 4:13:29 PM	B57171			
Methylene Chloride	ND	3.0	µg/L	1	1/22/2019 4:13:29 PM	B57171			
n-Butylbenzene	ND	3.0	µg/L	1	1/22/2019 4:13:29 PM	B57171			
n-Propylbenzene	3.9	1.0	µg/L	1	1/22/2019 4:13:29 PM	B57171			
sec-Butylbenzene	ND	1.0	µg/L	1	1/22/2019 4:13:29 PM	B57171			
Styrene	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
tert-Butylbenzene	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
trans-1,2-DCE	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
1,1,1-Trichloroethane	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
1,1,2-Trichloroethane	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
Trichloroethene (TCE)	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
Trichlorofluoromethane	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
1,2,3-Trichloropropane	ND	2.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
Vinyl chloride	ND	1.0	μg/L	1	1/22/2019 4:13:29 PM	B57171			
Xylenes, Total	330	15	μg/L	10	1/23/2019 4:08:15 PM	R57206			
Surr: 1,2-Dichloroethane-d4	108 7	0-130	%Rec	1	1/22/2019 4:13:29 PM	B57171			
Surr: 4-Bromofluorobenzene	98.0 7	0-130	%Rec	1	1/22/2019 4:13:29 PM	B57171			
Surr: Dibromofluoromethane	108 7	0-130	%Rec	1	1/22/2019 4:13:29 PM	B57171			
Surr: Toluene-d8	104 7	0-130	%Rec	1	1/22/2019 4:13:29 PM	B57171			

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 MatrixH 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

Hall Environmental Analysis Laboratory, Inc.

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

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9.7

0.50

10.00

	mberwolf Er aufman No1	nvironm	ental	1								
Sample ID: MB	S	ampTyp	e: MB	BLK	Tes	TestCode: EPA Method 300.0: Anions						
Client ID: PBW		Batch ID: R57149			F	RunNo: 5	7149					
Prep Date:	Anal	ysis Date	e: 1/	/21/2019	S	SeqNo: 1	911765	Units: mg/L				
Analyte	Re	sult F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride		ND	0.10									
Chloride		ND	0.50									
Nitrogen, Nitrite (As N)		ND	0.10									
Bromide		ND	0.10									
Nitrogen, Nitrate (As N)		ND	0.10									
Phosphorus, Orthophosphate	e (As P	ND	0.50									
Sulfate		ND	0.50									
Sample ID: LCS	S	ampTyp	e: LC	s	Tes							
Client ID: LCSW		Batch ID): R5	57149	RunNo: 57149							
Prep Date:	Anal	ysis Date	e: 1/	/21/2019	S	SeqNo: 1	911766	Units: mg/L				
Analyte	Re	sult F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	0	.48	0.10	0.5000	0	96.4	90	110				
Chloride		4.8	0.50	5.000	0	95.5	90	110				
Nitrogen, Nitrite (As N)	0	.96	0.10	1.000	0	95.9	90	110				
Bromide		2.4	0.10	2.500	0	96.5	90	110				
Nitrogen, Nitrate (As N)		2.5	0.10	2.500	0	100	90	110				
Phosphorus, Orthophosphate	e (As P	4.8	0.50	5.000	0	95.7	90	110				
o. 16 /												

0

96.8

90

110

Qualifiers:

Sulfate

- * 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

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Client: Project:	Timberwo Kaufman	olf Enviror No1	imental									
Sample ID:	MB-42745	SampT	ype: ME	BLK	Tes	TestCode: EPA Method 8015M/D: Diesel Range						
Client ID:	PBW	Batch	ID: 42	745	F	RunNo: 5	7173					
Prep Date:	1/22/2019	Analysis D	ate: 1/	23/2019	S	SeqNo: 1	913176	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
•	rganics (DRO) e Organics (MRO)	ND ND	1.0 5.0									
Surr: DNOP		0.98		1.000		98.2	70	130				
Sample ID:	LCS-42745	SampT	ype: LC	S	TestCode: EPA Method 8015M/D: Diesel Range							
Client ID:	LCSW	Batch	ID: 42	745	RunNo: 57173							
Prep Date:	1/22/2019	Analysis D	ate: 1/	23/2019	SeqNo: 1913177 U			Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range O	rganics (DRO)	5.6	1.0	5.000	0	112	71.8	135				
Surr: DNOP		0.50		0.5000		99.8	70	130				
Sample ID:	1901789-001BMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	8015M/D: Die	sel Range	9		
Client ID:	MW2	Batch	ID: 42	745	F	RunNo: 5	7173					
Prep Date:	1/22/2019	Analysis D	ate: 1/	23/2019	S	SeqNo: 1	913184	Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range O	rganics (DRO)	5.6	1.0	5.000	0	112	68.1	137				
Surr: DNOP		0.50		0.5000		99.3	70	130				
Sample ID:	1901789-001BMSI	SampT	ype: M \$	SD	TestCode: EPA Method 8015M/D: Diesel Range							
Client ID:	ient ID: MW2 Batch ID: 42745				F		7173		-			

Client ID: MW2	Batch	D: 42	745	F	RunNo: 5	7173				
Prep Date: 1/22/2019	Analysis D	ate: 1/	23/2019	S	SeqNo: 1	913185	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.7	1.0	5.000	0	114	68.1	137	2.02	20	
Surr: DNOP	0.50		0.5000		99.4	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

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01789

14-Jun-19

	Fimberwolf Enviro Kaufman No1	nmental								
Sample ID: 100ng Ic	s Samp	Гуре: LC	S	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: LCSW	Batc	h ID: B5	7171	F	RunNo: 5	7171				
Prep Date:	Analysis [Date: 1/	22/2019	5	SeqNo: 1	912422	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	20	1.0	20.00	0	99.3	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.1	70	130			
Surr: 1,2-Dichloroethane			10.00		105	70	130			
Surr: 4-Bromofluorobenz			10.00		107	70	130			
Surr: Dibromofluorometh			10.00		106	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			
Sample ID: rb	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batc	h ID: B5	7171	F	RunNo: 5	7171				
Prep Date:	Analysis [Date: 1/	22/2019	S	SeqNo: 1	912429	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								
Methyl tert-butyl ether (MT		1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide Carbon Tetrachloride	ND	10								
	ND	1.0								
Chlorobenzene Chloroethane	ND	1.0								
	ND	2.0								
Chloroform Chloromethane	ND	1.0								
	ND	3.0								
2-Chlorotoluene	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

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WO#: **1901789**

14-Jun-19

	mberwolf Environ ufman No1	nmental								
Sample ID: rb	SampT	ype: MBLK	Tes	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch	n ID: B57171	F	RunNo: 5	7171					
Prep Date:	Analysis D	Date: 1/22/2019	:	SeqNo: 1	912429	Units: µg/L				
Analyte	Result	PQL SPK value	e SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	e ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene 2-Hexanone	ND ND	1.0 10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

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

WO#:	1901789

14-Jun-19

Client: Timberw	olf Enviro	nmental								
Project: Kaufman	No1									
Sample ID: rb	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	n ID: B5	7171	F	RunNo: 5	57171				
Prep Date:	Analysis D	Date: 1/	22/2019	S	SeqNo: 1	912429	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			
Sample ID: 100ng Ics	SampT	ype: LC	S	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: LCSW	Batch	n ID: R5	7206	F	RunNo: 5	7206				
Prep Date:	Analysis D	Date: 1/	23/2019	S	SeqNo: 1	913462	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	19	1.0	20.00	0	93.0	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	9.8		10.00		97.8	70	130			
Sample ID: rb	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	n ID: R5	7206	F	RunNo: 5	7206				
Prep Date:	Analysis D	Date: 1/	23/2019	5	SeqNo: 1	913486	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			
Sample ID: 1901789-001ams	SampT	уре: М	6	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: MW2	Batch	n ID: B5	7171	F	RunNo: 5	57171				
Prep Date:	Analysis D	Date: 1/	22/2019	\$	SeqNo: 2	052598	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	70	130			
Toluene	20	1.0	20.00	0	99.8	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
	~~	4.0	20.00	0	102	67.6	130			
1,1-Dichloroethene	20	1.0	20.00	0	102	67.6	150			

Qualifiers:

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

^{*} Value exceeds Maximum Contaminant Level.

Timberwolf Environmental

14-Jun-19

1901789

WO#:

Project: Kaufman	No1											
Sample ID: 1901789-001ams	SampT	ype: MS	3	Test	tCode: EF	PA Method	8260B: VOL	ATILES				
Client ID: MW2	Batch	n ID: B5	7171	RunNo: 57171								
Prep Date:	Analysis D	ate: 1/	22/2019	S	BeqNo: 20	052598	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130					
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130					
Surr: Dibromofluoromethane	11		10.00		109	70	130					
Surr: Toluene-d8	10		10.00		99.6	70	130					
Sample ID: 1901789-001amsd	SampT	ype: MS	SD	Tes	tCode: EF	PA Method	8260B: VOL	ATILES				
Sample ID: 1901789-001amsd Client ID: MW2		ype: MS 1D: B5			tCode: EF		8260B: VOL	ATILES				
		n ID: B5	7171	R		7171	8260В: VOL Units: µg/L	ATILES				
Client ID: MW2	Batch	n ID: B5	7171 22/2019	R	RunNo: 5	7171		ATILES %RPD	RPDLimit	Qual		
Client ID: MW2 Prep Date:	Batch Analysis D	n ID: B5 Date: 1/	7171 22/2019	R	RunNo: 5 SeqNo: 2	7171 052599	Units: µg/L		RPDLimit 20	Qual		
Client ID: MW2 Prep Date: Analyte Benzene	Batch Analysis D Result	n ID: B5 Date: 1/ PQL	7171 22/2019 SPK value	R S SPK Ref Val	RunNo: 5 SeqNo: 20 %REC	7171 052599 LowLimit	Units: µg/L HighLimit	%RPD		Qual		
Client ID: MW2 Prep Date: Analyte	Batch Analysis D Result 21	Date: 1 / PQL 1.0	7171 22/2019 SPK value 20.00	R SPK Ref Val 0	RunNo: 5 SeqNo: 2 <u>%REC</u> 105	7171 052599 LowLimit 70	Units: µg/L HighLimit 130	%RPD 2.37	20	Qual		
Client ID: MW2 Prep Date: Analyte Benzene Toluene	Batch Analysis D Result 21 19	Date: 1 / Pate: 1 / PQL 1.0 1.0	7171 22/2019 SPK value 20.00 20.00	R S SPK Ref Val 0 0	RunNo: 5 SeqNo: 2 <u>%REC</u> 105 93.6	7171 052599 LowLimit 70 70	Units: µg/L HighLimit 130 130	%RPD 2.37 6.39	20 20	Qual		
Client ID: MW2 Prep Date: Analyte Benzene Toluene Chlorobenzene	Batch Analysis D Result 21 19 20	Date: 1 / Pate: 1 / PQL 1.0 1.0 1.0	7171 22/2019 SPK value 20.00 20.00 20.00	R S SPK Ref Val 0 0 0	RunNo: 5 SeqNo: 20 <u>%REC</u> 105 93.6 97.6	7171 052599 LowLimit 70 70 70	Units: µg/L HighLimit 130 130 130	%RPD 2.37 6.39 7.50	20 20 20	Qual		
Client ID: MW2 Prep Date: Analyte Benzene Toluene Chlorobenzene 1,1-Dichloroethene	Batch Analysis D Result 21 19 20 20	Pate: 1 / PQL 1.0 1.0 1.0 1.0	7171 22/2019 SPK value 20.00 20.00 20.00 20.00	R SPK Ref Val 0 0 0 0	RunNo: 5 SeqNo: 20 %REC 105 93.6 97.6 101	7171 052599 LowLimit 70 70 70 67.6	Units: µg/L HighLimit 130 130 130 130	%RPD 2.37 6.39 7.50 1.08	20 20 20 20	Qual		
Client ID: MW2 Prep Date: Analyte Benzene Toluene Chlorobenzene 1,1-Dichloroethene Trichloroethene (TCE)	Batch Analysis D Result 21 19 20 20 20 18	Pate: 1 / PQL 1.0 1.0 1.0 1.0	7171 22/2019 20.00 20.00 20.00 20.00 20.00 20.00	R SPK Ref Val 0 0 0 0	RunNo: 5 SeqNo: 20 %REC 105 93.6 97.6 101 89.6	7171 052599 LowLimit 70 70 70 67.6 70	Units: µg/L HighLimit 130 130 130 130 130 130	%RPD 2.37 6.39 7.50 1.08 3.89	20 20 20 20 20	Qual		
Client ID: MW2 Prep Date: Analyte Benzene Toluene Chlorobenzene 1,1-Dichloroethene Trichloroethene (TCE) Surr: 1,2-Dichloroethane-d4	Batch Analysis D Result 21 19 20 20 18 11	Pate: 1 / PQL 1.0 1.0 1.0 1.0	7171 22/2019 20.00 20.00 20.00 20.00 20.00 20.00 10.00	R SPK Ref Val 0 0 0 0	RunNo: 57 SeqNo: 20 %REC 105 93.6 97.6 101 89.6 107	7171 052599 LowLimit 70 70 70 67.6 70 70 70 70	Units: µg/L HighLimit 130 130 130 130 130 130 130	%RPD 2.37 6.39 7.50 1.08 3.89 0	20 20 20 20 20 0	Qual		

Qualifiers:

Client:

- * 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 26 of 37

WO#: **1901789**

14-Jun-19

Client: Timberw	volf Enviro	nmental								
Project: Kaufmar	n No1									
Sample ID: MB-42755	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8270C: Semi	volatiles		
Client ID: PBW		n ID: 42		F	RunNo: 5	7311				
Prep Date: 1/23/2019	Analysis D				SeqNo: 1		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10					-			
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
_,		20								

- * 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

Timberwolf Environmental

Kaufman No1

WO#: 1901789

Qual

14-Jun-19

Troject. Raum										
Sample ID: MB-42755	SampTy	ре: МВ	LK	Tes	tCode: El	PA Method	8270C: Semi	volatiles		
Client ID: PBW	Batch	ID: 427	755	F	RunNo: 5	7311				
Prep Date: 1/23/2019	Analysis Da	ite: 1/2	28/2019	S	SeqNo: 1	917305	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	180	10	200.0		91.9	15	74.1			
Surr: Phenol-d5	150		200.0		75.8	15	59.8			
Surr: 2,4,6-Tribromophenol	190		200.0		97.3	22.1	112			
Surr: Nitrobenzene-d5	99		100.0		97.3 99.4	33.2	94			
Surr: 2-Fluorobiphenyl	99 91		100.0		99.4 91.4	33.2	94 90.9			
	91		100.0		91.4	- 34	90.9			

Qualifiers:

Client:

Project:

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

Surr: 4-Terphenyl-d14

% Recovery outside of range due to dilution or matrix S

Analyte detected in the associated Method Blank в

97.5

15

149

Е Value above quantitation range

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit

100.0

97

S

s

S S

WO#: **1901789**

14-Jun-19

Client: Timberwolf Environmental

Project: Kaufman No1

Sample ID: LCS-42755	SampT	ype: LC	S	Tes	Code: El	PA Method	8270C: Semiv	volatiles		
Client ID: LCSW	Batch	n ID: 427	755	R	unNo: 5	7311				
Prep Date: 1/23/2019	Analysis D	ate: 1/2	28/2019	S	eqNo: 1	917306	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	81	10	100.0	0	80.8	55.1	104			
4-Chloro-3-methylphenol	200	10	200.0	0	101	57	115			
2-Chlorophenol	180	10	200.0	0	89.2	43.4	112			
1,4-Dichlorobenzene	80	10	100.0	0	79.7	38	95.2			
2,4-Dinitrotoluene	75	10	100.0	0	74.7	55.1	96.7			
N-Nitrosodi-n-propylamine	95	10	100.0	0	94.6	55	112			
1-Nitrophenol	170	10	200.0	0	84.3	16.6	93			
Pentachlorophenol	160	20	200.0	0	79.3	43.2	104			
Phenol	160	10	200.0	0	78.6	21.3	85.7			
Pyrene	87	10	100.0	0	86.8	64.9	105			
1,2,4-Trichlorobenzene	84	10	100.0	0	84.2	42.6	107			
Surr: 2-Fluorophenol	160		200.0		81.7	15	74.1			S
Surr: Phenol-d5	150		200.0		74.6	15	59.8			S
Surr: 2,4,6-Tribromophenol	190		200.0		93.5	22.1	112			
Surr: Nitrobenzene-d5	89		100.0		89.2	33.2	94			
Surr: 2-Fluorobiphenyl	76		100.0		76.0	34	90.9			
Surr: 4-Terphenyl-d14	95		100.0		94.8	15	149			
Somple ID: los d 10755										
Sample ID: Icsd-42755	SampT	ype: LC	SD	Test	Code: El	PA Method	8270C: Semiv	volatiles		
Client ID: LCSS02		ype: LC 1 ID: 427			Code: El		8270C: Semi	volatiles		
		n ID: 427	755	R		7332	8270C: Semi Units: μg/L	volatiles		
Client ID: LCSS02 Prep Date: 1/23/2019	Batch	n ID: 427	755 29/2019	R	unNo: 5	7332		volatiles %RPD	RPDLimit	Qual
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte	Batch Analysis D	n ID: 42 7 Date: 1/ 2	755 29/2019	R	unNo: 5 eqNo: 1	7332 918063	Units: µg/L		RPDLimit 34.9	Qual
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte Acenaphthene	Batch Analysis D Result	Di ID: 42 7 Date: 1/ 2 PQL	755 29/2019 SPK value	R S SPK Ref Val	unNo: 5 eqNo: 1 %REC	7332 918063 LowLimit	Units: µg/L HighLimit	%RPD		Qual
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte Acenaphthene I-Chloro-3-methylphenol	Batch Analysis D Result 64	n ID: 42 7 Date: 1/ 2 PQL 10	755 29/2019 SPK value 100.0	R S SPK Ref Val 0	aunNo: 5 6eqNo: 1 %REC 63.8	7332 918063 LowLimit 55.1	Units: µg/L HighLimit 104	%RPD 23.5	34.9	Qual
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte xeenaphthene -Chloro-3-methylphenol -Chlorophenol	Batch Analysis D Result 64 160	n ID: 42 7 pate: 1 /2 PQL 10 10	755 29/2019 SPK value 100.0 200.0	R S SPK Ref Val 0 0	anNo: 5 eqNo: 1 %REC 63.8 81.2	7332 918063 LowLimit 55.1 57	Units: µg/L HighLimit 104 115	%RPD 23.5 22.0	34.9 30.2	Qual
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte Acenaphthene I-Chloro-3-methylphenol 2-Chlorophenol ,4-Dichlorobenzene	Batch Analysis D Result 64 160 140	Date: 1 /2 Pate: 1 /2 PQL 10 10 10	755 29/2019 SPK value 100.0 200.0 200.0	R S SPK Ref Val 0 0 0	eunNo: 5 eqNo: 1 <u>%REC</u> 63.8 81.2 72.4	7332 918063 LowLimit 55.1 57 43.4	Units: µg/L HighLimit 104 115 112	%RPD 23.5 22.0 20.7	34.9 30.2 49.5	Qual
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte Accenaphthene -Chloro-3-methylphenol -Chlorophenol ,4-Dichlorobenzene ,4-Dinitrotoluene	Batch Analysis D Result 64 160 140 58	Pate: 1/2 Pate: 1/2 PQL 10 10 10 10	755 29/2019 SPK value 100.0 200.0 200.0 100.0	R S SPK Ref Val 0 0 0 0	eqNo: 5 %REC 63.8 81.2 72.4 58.3	7332 918063 LowLimit 55.1 57 43.4 38	Units: µg/L HighLimit 104 115 112 95.2	%RPD 23.5 22.0 20.7 31.0	34.9 30.2 49.5 43.2	Qual
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene V-Nitrosodi-n-propylamine	Batch Analysis D Result 64 160 140 58 61	Pate: 1/2 Pate: 1/2 PQL 10 10 10 10 10	755 29/2019 SPK value 100.0 200.0 200.0 100.0 100.0	R S SPK Ref Val 0 0 0 0 0 0	eunNo: 5 6eqNo: 1 %REC 63.8 81.2 72.4 58.3 61.1	7332 918063 LowLimit 55.1 57 43.4 38 55.1	Units: µg/L HighLimit 104 115 112 95.2 96.7	%RPD 23.5 22.0 20.7 31.0 20.1	34.9 30.2 49.5 43.2 49.9	Qual
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte Analyte Analyte -Chloro-3-methylphenol -Chlorophenol ,4-Dichlorobenzene ,4-Dinitrotoluene I-Nitrosodi-n-propylamine -Nitrophenol	Batch Analysis D Result 64 160 140 58 61 73	PQL 10 PQL 10 10 10 10 10 10 10 10	755 29/2019 SPK value 100.0 200.0 200.0 100.0 100.0 100.0	R S SPK Ref Val 0 0 0 0 0 0 0 0	tunNo: 5 ieqNo: 1 <u>%REC</u> 63.8 81.2 72.4 58.3 61.1 73.1	7332 918063 LowLimit 55.1 57 43.4 38 55.1 55	Units: µg/L HighLimit 104 115 112 95.2 96.7 112	%RPD 23.5 22.0 20.7 31.0 20.1 25.5	34.9 30.2 49.5 43.2 49.9 42.1	
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte cenaphthene -Chloro-3-methylphenol -Chlorophenol ,4-Dichlorobenzene ,4-Dinitrotoluene I-Nitrosodi-n-propylamine -Nitrophenol Pentachlorophenol	Batch Analysis E Result 64 160 140 58 61 73 100	PQL 10 10 10 10 10 10 10 10 10 10 10	755 29/2019 SPK value 100.0 200.0 200.0 100.0 100.0 100.0 200.0	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0	eunNo: 5 6eqNo: 19 63.8 81.2 72.4 58.3 61.1 73.1 50.8	7332 918063 LowLimit 55.1 57 43.4 38 55.1 55 16.6	Units: µg/L HighLimit 104 115 112 95.2 96.7 112 93	%RPD 23.5 22.0 20.7 31.0 20.1 25.5 49.5	34.9 30.2 49.5 43.2 49.9 42.1 31.5	
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte cenaphthene -Chloro-3-methylphenol -Chlorophenol ,4-Dichlorobenzene ,4-Dinitrotoluene I-Nitrosodi-n-propylamine -Nitrophenol Pentachlorophenol	Batch Analysis D Result 64 160 140 58 61 73 100 120	PQL 10 10 10 10 10 10 10 10 10 10 10 20	755 29/2019 SPK value 100.0 200.0 200.0 100.0 100.0 200.0 200.0	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	eunNo: 5 6eqNo: 19 %REC 63.8 81.2 72.4 58.3 61.1 73.1 50.8 58.0	7332 918063 LowLimit 55.1 57 43.4 38 55.1 55 16.6 43.2	Units: µg/L HighLimit 104 115 112 95.2 96.7 112 93 104	%RPD 23.5 22.0 20.7 31.0 20.1 25.5 49.5 31.1	34.9 30.2 49.5 43.2 49.9 42.1 31.5 52.5	
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte	Batch Analysis D Result 64 160 140 58 61 73 100 120 120	Pate: 1 /2 pate: 1 /2 10 10 10 10 10 10 10 10 10 20 10	755 29/2019 SPK value 200.0 200.0 100.0 100.0 100.0 200.0 200.0 200.0	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	eunNo: 5 6eqNo: 1 %REC 63.8 81.2 72.4 58.3 61.1 73.1 50.8 58.0 60.3	7332 918063 LowLimit 55.1 57 43.4 38 55.1 55 16.6 43.2 21.3	Units: µg/L HighLimit 104 115 112 95.2 96.7 112 93 104 85.7	%RPD 23.5 22.0 20.7 31.0 20.1 25.5 49.5 31.1 26.5	34.9 30.2 49.5 43.2 49.9 42.1 31.5 52.5 54.4	
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte cenaphthene -Chloro-3-methylphenol -Chlorophenol ,4-Dichlorobenzene ,4-Dinitrotoluene I-Nitrosodi-n-propylamine -Nitrophenol Pentachlorophenol Phenol	Batch Analysis D 64 160 140 58 61 73 100 120 120 70	n ID: 427 pate: 1/2 10 10 10 10 10 10 10 10 10 20 10 10	755 29/2019 20/00 200.0 200.0 100.0 100.0 200.0 200.0 200.0 200.0 100.0	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	eqNo: 5 6eqNo: 1 %REC 63.8 81.2 72.4 58.3 61.1 73.1 50.8 58.0 60.3 70.1	7332 918063 LowLimit 55.1 57 43.4 38 55.1 55 16.6 43.2 21.3 64.9	Units: µg/L HighLimit 104 115 112 95.2 96.7 112 93 104 85.7 105	%RPD 23.5 22.0 20.7 31.0 20.1 25.5 49.5 31.1 26.5 21.3	34.9 30.2 49.5 43.2 49.9 42.1 31.5 52.5 54.4 30.7	
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 4,4-Dichlorobenzene 2,4-Dinitrotoluene N-Nitrosodi-n-propylamine 4-Nitrosphenol Pentachlorophenol Phenol Pyrene 1,2,4-Trichlorobenzene Surr: 2-Fluorophenol	Batch Analysis D Result 64 160 140 58 61 73 100 120 120 70 68	n ID: 427 pate: 1/2 10 10 10 10 10 10 10 10 10 20 10 10	755 29/2019 200.0 200.0 200.0 100.0 100.0 200.0 200.0 200.0 200.0 100.0 100.0	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tunNo: 5 6eqNo: 1 %REC 63.8 81.2 72.4 58.3 61.1 73.1 50.8 58.0 60.3 70.1 67.6	7332 918063 LowLimit 55.1 57 43.4 38 55.1 55 16.6 43.2 21.3 64.9 42.6	Units: µg/L HighLimit 104 115 112 95.2 96.7 112 93 104 85.7 105 107	%RPD 23.5 22.0 20.7 31.0 20.1 25.5 49.5 31.1 26.5 21.3 22.0	34.9 30.2 49.5 43.2 49.9 42.1 31.5 52.5 54.4 30.7 48.1	
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 4.4-Dichlorobenzene 2,4-Dinitrotoluene 4-Nitrosodi-n-propylamine 4-Nitrosodi-n-propylamine 4-Nitrosodi-n-propylamine 4-Nitrophenol Pentachlorophenol Phenol Pyrene 1,2,4-Trichlorobenzene Surr: 2-Fluorophenol Surr: Phenol-d5	Batch Analysis D Result 64 160 140 58 61 73 100 120 120 70 68 98 98 92	n ID: 427 pate: 1/2 10 10 10 10 10 10 10 10 10 20 10 10	755 29/2019 SPK value 200.0 200.0 200.0 100.0 200.0 200.0 200.0 200.0 100.0 100.0 200.0 200.0 200.0	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tunNo: 5 ieqNo: 1 %REC 63.8 81.2 72.4 58.3 61.1 73.1 50.8 58.0 60.3 70.1 67.6 48.8 46.0	7332 918063 LowLimit 55.1 57 43.4 38 55.1 55 16.6 43.2 21.3 64.9 42.6 15 15	Units: µg/L HighLimit 104 115 112 95.2 96.7 112 93 104 85.7 105 107 74.1 59.8	%RPD 23.5 22.0 20.7 31.0 20.1 25.5 49.5 31.1 26.5 21.3 22.0 0 0	34.9 30.2 49.5 43.2 49.9 42.1 31.5 52.5 54.4 30.7 48.1 0 0	
Client ID: LCSS02 Prep Date: 1/23/2019 Analyte Acenaphthene 4-Chloro-3-methylphenol 2-Chlorophenol 4,4-Dichlorobenzene 2,4-Dinitrotoluene N-Nitrosodi-n-propylamine 4-Nitrosphenol Pentachlorophenol Phenol Pyrene 1,2,4-Trichlorobenzene Surr: 2-Fluorophenol	Batch Analysis D Result 64 160 140 58 61 73 100 120 120 70 68 98	n ID: 427 pate: 1/2 10 10 10 10 10 10 10 10 10 20 10 10	755 29/2019 2000 2000 2000 2000 100.0 100.0 200.0 200.0 200.0 100.0 100.0 200.0	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tunNo: 5 ieqNo: 1 %REC 63.8 81.2 72.4 58.3 61.1 73.1 50.8 58.0 60.3 70.1 67.6 48.8	7332 918063 LowLimit 55.1 57 43.4 38 55.1 55 16.6 43.2 21.3 64.9 42.6 15	Units: µg/L HighLimit 104 115 112 95.2 96.7 112 93 104 85.7 105 107 74.1	%RPD 23.5 22.0 20.7 31.0 20.1 25.5 49.5 31.1 26.5 21.3 22.0 0	34.9 30.2 49.5 43.2 49.9 42.1 31.5 52.5 54.4 30.7 48.1 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

WO#:	1901789
	14-Jun-19

Client: Project:		Timberwolf Environmental Kaufman No1										
Sample ID: Icsd-	-42755	SampT	ype: LC	SD	Tes	tCode: El	PA Method	8270C: Semi	volatiles			
Client ID: LCS	S02	Batch	D: 42	755	F	tunNo: 5	7332					
Prep Date: 1/2:	3/2019	Analysis D	ate: 1/	/29/2019	S	eqNo: 1	918063	Units: µg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Terphenyl-d	114	57		100.0		56.5	15	149	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

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NO#:	1901789
	14 T 10

Client:	Timberwolf Environmental
Project:	Kaufman No1

WO#:

14-Jun-19

Sample ID: Ics-1 99.0uS eC	SampT	ype: Ics		Tes	Code: SI	M2510B: Sp	ictance			
Client ID: LCSW	Batch	ID: R5	7160	R	unNo: 5 7	7160				
Prep Date:	Analysis D	Analysis Date: 1/21/2019			eqNo: 19	911988	Units: µmho	os/cm		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	98	5.0	99.00	0	98.9	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
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- B Analyte detected in the associated Method Blank
- E Value above quantitation range
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- RL Reporting Limit

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Client: Project:	Timberwo Kaufman		onmenta	l							
Sample ID:	MB-42731	Sam	Type: MI	BLK	Tes	tCode: E	PA Method	7470: Mercur	v		
Client ID:			ch ID: 42			RunNo: 5			,		
Prep Date:	1/21/2019		Date: 1		ę	SegNo: 1	913735	Units: mg/L			
						•		U	0/ 000		Qual
Analyte Mercury		Result ND	PQL 0.00020	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
,											
Sample ID:	LCS-42731	Samp	Type: LC	S	Tes	tCode: E	PA Method	7470: Mercur	У		
Client ID:	LCSW	Bat	ch ID: 42	731	F	RunNo: 5	57210				
Prep Date:	1/21/2019	Analysis	Date: 1/	23/2019	5	SeqNo: 1	913736	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0053	0.00020	0.005000	0	106	80	120			
Sample ID:	1901789-006EMS	Samp	Type: M	3	Tes	tCode: E	PA Method	7470: Mercur	у		
Client ID:	MW1	Bat	ch ID: 42	731	F	RunNo: 5	57210				
Prep Date:	1/21/2019	Analysis	Date: 1	23/2019	S	SeqNo: 1	913738	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0057	0.00020	0.005000	.00006954	113	75	125			
Sample ID:	1901789-006EMSI) Samp	Type: M	SD	Tes	tCode: E	PA Method	7470: Mercur	v		
Client ID:	MW1		ch ID: 42			RunNo: 5			-		
Prep Date:	1/21/2019		Date: 1	-		SeqNo: 1	-	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0059	0.00020	0.005000	.00006954	116	75	125	2.56	20	

Qualifiers:

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

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

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14-Jun-19

WO#:	1901789

14-Jun-19

Client: Project:	Timberwo Kaufman		onmental								
Sample ID:	MB-42806	Samp	Туре: МЕ	BLK	Tes	tCode: E	PA 6010B:	Total Recover	able Meta	als	
Client ID:	PBW	Bate	ch ID: 42	806	F	RunNo: 5	7316				
Prep Date:	1/24/2019	Analysis	Date: 1/	28/2019	S	SeqNo: 1	917487	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium		ND	0.020								
Cadmium		ND	0.0020								
Calcium		ND	1.0								
Chromium		ND	0.0060								
Magnesium		ND	1.0								
Potassium		ND	1.0								
Selenium		ND	0.050								
Silver		ND	0.0050								
Sodium		ND	1.0								
Sample ID:	LCS-42806	Samp	Type: LC	S	Tes	tCode: E	PA 6010B: "	Total Recover	able Meta	als	
Client ID:	LCSW	Bate	ch ID: 42	806	F	RunNo: 5	7316				
Prep Date:	1/24/2019	Analysis	Date: 1/	28/2019	S	SeqNo: 1	917488	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium		0.50	0.020	0.5000	0	99.6	80	120			
Cadmium		0.51	0.0020	0.5000	0	102	80	120			
Calcium		50	1.0	50.00	0	99.7	80	120			
Chromium		0.51	0.0060	0.5000	0	101	80	120			
Magnesium		50	1.0	50.00	0	99.3	80	120			
Potassium		49	1.0	50.00	0	98.2	80	120			
Selenium		0.48	0.050	0.5000	0	96.8	80	120			
Silver		0.10	0.0050	0.1000	0	101	80	120			
Sodium		49	1.0	50.00	0	98.7	80	120			
Sample ID:	1901789-006EMS	Samp	Туре: МS	3	Tes	tCode: E	PA 6010B: "	Total Recover	able Meta	als	
Client ID:	MW1	Bate	ch ID: 42	806	F	RunNo: 5	7316				
Prep Date:	1/24/2019	Analysis	Date: 1/	28/2019	S	SeqNo: 1	917493	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium		0.55	0.020	0.5000	0.07931	93.9	75	125			
Cadmium		0.50	0.0020	0.5000	0	101	75	125			
Chromium		0.49	0.0060	0.5000	0.001728	97.0	75	125			
		54	1.0	50.00	3.337	101	75	125			
Potassium		-									
Potassium Selenium		0.48	0.050	0.5000	0	96.6	75	125			

- * 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

WO#: **1901789**

14-Jun-19

Client:Timberwolf EnvironmentalProject:Kaufman No1

Sample ID: 1901789-006EMSD SampType: MSD TestCode: EPA 6010B: Total Recoverable Metals Client ID: MW1 Batch ID: 42806 RunNo: 57316 Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917494 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Barium 0.54 0.020 0.5000 0.07931 92.9 75 125 0.888 Cadmium 0.50 0.0020 0.5000 0.01728 96.3 75 125 0.713	PDLimit Qu	
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917494 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Barium 0.54 0.020 0.5000 0.07931 92.9 75 125 0.888 Cadmium 0.50 0.0020 0.5000 0 100 75 125 0.552	2DI imit Qu	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Barium 0.54 0.020 0.5000 0.07931 92.9 75 125 0.888 Cadmium 0.50 0.0020 0.5000 0 100 75 125 0.552	PDI imit Qu	
Barium 0.54 0.020 0.5000 0.07931 92.9 75 125 0.888 Cadmium 0.50 0.0020 0.5000 0 100 75 125 0.552	PDI imit Qu	
Cadmium 0.50 0.0020 0.5000 0 100 75 125 0.552	22	ual
	20	
Chromium 0.48 0.0060 0.5000 0.001728 96.3 75 125 0.713	20	
	20	
Potassium 54 1.0 50.00 3.337 102 75 125 0.989	20	
Selenium 0.53 0.050 0.5000 0 106 75 125 9.27	20	
Silver 0.11 0.0050 0.1000 0.006835 102 75 125 1.70	20	
Sample ID: MB-42806 SampType: MBLK TestCode: EPA 6010B: Total Recoverable Metals		
Client ID: PBW Batch ID: 42806 RunNo: 57316		
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917519 Units: mg/L		
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF	PDLimit Qu	ual
Calcium ND 1.0		
Lead ND 0.0050		
Sodium ND 1.0		
Sample ID: LCS-42806 SampType: LCS TestCode: EPA 6010B: Total Recoverable Metals		
Client ID: LCSW Batch ID: 42806 RunNo: 57316		
Client ID: LCSW Batch ID: 42806 RunNo: 57316 Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L		
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L	PDLimit Qu	ual
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF	2DLimit Qu	ual
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Calcium 49 1.0 50.00 0 97.7 80 120	² DLimit Qu	ual
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Calcium 49 1.0 50.00 0 97.7 80 120 Lead 0.48 0.0050 0.5000 0 95.1 80 120	PDLimit Qu	ual
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Calcium 49 1.0 50.00 0 97.7 80 120 Lead 0.48 0.0050 0.5000 0 95.1 80 120	DLimit Qu	ual
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Calcium 49 1.0 50.00 0 97.7 80 120 Lead 0.48 0.0050 0.5000 0 95.1 80 120 Sodium 50 1.0 50.00 0 99.2 80 120	PDLimit Qu	ual
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo:: 1917520 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Calcium 49 1.0 50.00 0 97.7 80 120 120 Lead 0.48 0.0050 0.5000 0 95.1 80 120 120 Sodium 50 1.0 50.00 0 99.2 80 120 120	DLimit Qu	ual
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Calcium 49 1.0 50.00 0 97.7 80 120 120 Lead 0.48 0.0050 0.5000 0 95.1 80 120 120 120 Sodium 50 1.0 50.00 0 99.2 80 120		ual
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Calcium 49 1.0 50.00 0 97.7 80 120 120 Lead 0.48 0.0050 0.5000 0 95.1 80 120 120 Sodium 50 1.0 50.00 0 99.2 80 120 120 120 Sample ID: 1901789-006EMS SampType: MS TestCode: EPA 6010B: Total Recoverable Metals 120 <td></td> <td></td>		
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Calcium 49 1.0 50.00 0 97.7 80 120 120 Lead 0.48 0.0050 0.5000 0 95.1 80 120 120 Sodium 50 1.0 50.00 0 99.2 80 120 120 120 Sample ID: 1901789-006EMS SampType: MS TestCode: EPA 6010B: Total Recoverable Metals Client ID: MW1 Batch ID: 42806 RunNo: 57316 Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917523 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF		
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Calcium 49 1.0 50.00 0 97.7 80 120 120 Lead 0.48 0.0050 0.5000 0 95.1 80 120 120 120 Sodium 50 1.0 50.00 0 99.2 80 120		
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Calcium 49 1.0 50.00 0 97.7 80 120 120 120 Lead 0.48 0.0050 0.5000 0 95.1 80 120		
Prep Date: 1/24/2019 Analysis Date: 1/28/2019 SeqNo: 1917520 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Calcium 49 1.0 50.00 0 97.7 80 120 120 120 Lead 0.48 0.0050 0.5000 0 99.2 80 120	PDLimit Qu	

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

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- E Value above quantitation range
- J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

WO#:	1901789

14-Jun-19

Client:	Timberwo	olf Enviro	nmental	l							
Project:	Kaufman	No1									
Sample ID:	MB-42806	SampT	ype: ME	BLK	Tes	tCode: El	PA 6010B: 1	Total Recover	able Meta	als	
Client ID:	PBW	Batch	h ID: 42	806	R	RunNo: 5	7326				
Prep Date:	1/24/2019	Analysis D	Date: 1/	29/2019	S	SeqNo: 1	917932	Units: mg/L			
Analyte		Result	PQL 0.020	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.020								
Sample ID:	LCS-42806	SampT	ype: LC	s	Tes	tCode: El	PA 6010B: 1	Total Recover	able Meta	als	
Client ID:	LCSW	Batch	h ID: 42	806	R	RunNo: 5	7326				
Prep Date:	1/24/2019	Analysis D	Date: 1/	29/2019	S	SeqNo: 1	917933	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
A		0.47	0 0 0 0	0 5000	0	00.0	00	100			
Arsenic		0.47	0.020	0.5000	0	93.6	80	120			
	1901789-006EMS		0.020		-			Total Recover	able Meta	als	
	1901789-006EMS MW1	SampT		6	Tes		PA 6010B: 1	-	able Meta	als	
Sample ID:	MW1	SampT	Type: MS	S 806	Tesi	tCode: El	PA 6010B: 7 7326	-	able Meta	als	
Sample ID: Client ID:	MW1	SampT Batch	Type: MS	5 806 /29/2019	Tesi	tCode: El RunNo: 5 SeqNo: 1	PA 6010B: 7 7326	Total Recover	vable Meta %RPD	als RPDLimit	Qual
Sample ID: Client ID: Prep Date:	MW1	SampT Batch Analysis D	Type: M: h ID: 42 Date: 1/	5 806 /29/2019	Tesi R S	tCode: El RunNo: 5 SeqNo: 1	PA 6010B: 7 7326 917936	Total Recover			Qual
Sample ID: Client ID: Prep Date: Analyte Arsenic	MW1	SampT Batch Analysis D Result 0.49	ype: M h ID: 42 Date: 1 / PQL	5 806 /29/2019 SPK value 0.5000	Tesi R SPK Ref Val 0	tCode: El RunNo: 5 SeqNo: 1 %REC 99.0	PA 6010B: ⁻ 7326 917936 LowLimit 75	Total Recover Units: mg/L HighLimit	%RPD	RPDLimit	Qual
Sample ID: Client ID: Prep Date: Analyte Arsenic Sample ID:	MW1 1/24/2019	SampT Batch Analysis D Result 0.49	Type: M h ID: 42 Date: 1/ PQL 0.020	S 806 (29/2019 SPK value 0.5000 SD	Test R SPK Ref Val 0 Test	tCode: El RunNo: 5 SeqNo: 1 %REC 99.0	PA 6010B: ⁻ 7326 917936 LowLimit 75 PA 6010B: ⁻	Total Recover Units: mg/L HighLimit 125	%RPD	RPDLimit	Qual
Sample ID: Client ID: Prep Date: Analyte Arsenic Sample ID:	MW1 1/24/2019 1901789-006EMSI MW1	SampT Batch Analysis D Result 0.49	Type: MS h ID: 42 Date: 1/ PQL 0.020 Type: MS h ID: 42	S 806 /29/2019 SPK value 0.5000 SD 806	Test R SPK Ref Val 0 Test R	tCode: El RunNo: 5 SeqNo: 1 %REC 99.0 tCode: El	PA 6010B: 7 7326 917936 LowLimit 75 PA 6010B: 7 7326	Total Recover Units: mg/L HighLimit 125	%RPD	RPDLimit	Qual
Sample ID: Client ID: Prep Date: Analyte Arsenic Sample ID: Client ID:	MW1 1/24/2019 1901789-006EMSI MW1	SampT Batch Analysis D Result 0.49 D SampT Batch	Type: MS h ID: 42 Date: 1/ PQL 0.020 Type: MS h ID: 42	S 806 29/2019 SPK value 0.5000 SD 806 29/2019	Test R SPK Ref Val 0 Test R	tCode: El RunNo: 5 SeqNo: 19 %REC 99.0 tCode: El RunNo: 5 SeqNo: 19	PA 6010B: 7 7326 917936 LowLimit 75 PA 6010B: 7 7326	Total Recover Units: mg/L HighLimit 125 Total Recover	%RPD	RPDLimit	Qual

- * 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

WO#:	1901789

14-Jun-19

Client: Project:	Timberwo Kaufman	olf Enviroi No1	nmental								
110jeet.	Kaurman	1101									
Sample ID:	1901789-002ams	SampT	ype: MS	6	Tes	tCode: El	PA Method	8015D: Gasol	line Rang	e	
Client ID:	MW3	Batch	n ID: R5	7171	F	RunNo: 5	7171				
Prep Date:		Analysis D	Date: 1/	22/2019	S	SeqNo: 1	912400	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	0.52	0.050	0.5000	0	104	63.4	130			
Surr: BFB		9.8		10.00		97.7	70	130			
Sample ID:	1901789-002amsd	SampT	ype: MS	SD.	Tes	tCode: El	PA Method	8015D: Gasol	line Rang	e	
Client ID:	MW3	Batch	n ID: R5	7171	F	RunNo: 5	7171				
Prep Date:		Analysis D	Date: 1/	22/2019	S	SeqNo: 1	912401	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	0.49	0.050	0.5000	0	98.2	63.4	130	5.62	20	
Surr: BFB		9.7		10.00		96.8	70	130	0	0	
Sample ID:	2.5ug gro Ics	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gasol	line Rang	e	
Client ID:	LCSW	Batch	n ID: R5	7171	F	RunNo: 5	7171				
Prep Date:		Analysis D)ate: 1/	22/2019	S	SeqNo: 1	912406	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	0.53	0.050	0.5000	0	106	70	130			
Surr: BFB		9.8		10.00		98.0	70	130			
Sample ID:	rb	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gasol	line Rang	e	
Client ID:	PBW	Batch	n ID: R5	7171	F	RunNo: 5	7171				
Prep Date:		Analysis D	ate: 1/	22/2019	S	SeqNo: 1	912407	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	ND	0.050								
Surr: BFB		9.7		10.00		96.6	70	130			

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
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- 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

Client: Project:		erwolf Enviror nan No1	nmental								
Sample ID:	MB-42739	SampT	ype: ME	BLK	Tes	tCode: SI	M2540C MC	DD: Total Dise	solved So	lids	
Client ID:	PBW	Batch	D: 42	739	F	RunNo: 5	7198				
Prep Date:	1/22/2019	Analysis D	ate: 1/	23/2019	S	SeqNo: 1	913205	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved S	Solids	ND	20.0								
Sample ID: I	LCS-42739	SampT	ype: LC	S	Tes	tCode: SI	M2540C MC	DD: Total Dise	solved So	lids	
Client ID:	LCSW	Batch	ID: 42	739	F	RunNo: 5	7198				
Prep Date:	1/22/2019	Analysis D	ate: 1/	23/2019	5	SeqNo: 1	913206	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved S	Solids	1010	20.0	1000	0	101	80	120			

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- D Sample Diluted Due to Matrix
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- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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

ANAL	RONMENTAL YSIS Ratory		TE	ill Environme CL: 505-345-, Website: ww	490 Albuquero 3975 FAX:	01 Hav que, N. 505-3	vkins NE M 87109 45-4107	Sai	mple Log-In C	heck List
Client Name:	TIMBERWOLF E	NVIRON	Work	order Num	nber: 190	1789			RcptNo:	1
Received By:	Victoria Zellar		1/19/20	019 11:10:0	0 AM		Via	tnia G L Bae	illan	
Completed By:	Leah Baca		1/21/20	019 10:24:0	2 AM		/	1 Br		
Reviewed By: Labeled b	ENM	9	121/	19			1_001	Alle	a.	
Chain of Cus	stody									
1. Is Chain of C	sustody complete?				Yes	✓	Ν	lo 🗌	Not Present	
 How was the 	sample delivered?				Cou	rier				
Log In 3. Was an atten	npt made to cool the	e samples?			Yes	✓	N	o 🗌	NA 🗌	
4. Were all sam	ples received at a te	mperature of	f >0° C f	to 6.0°C	Yes	✓	N	o 🗌		
5. Sample(s) in	proper container(s)'	?			Yes	✓	N	o 🗌		
S. Sufficient sam	nple volume for indic	ated test(s)?			Yes	✓	N	b		
. Are samples (except VOA and O	NG) properly	preserve	ed?	Yes	\checkmark	N	b		
. Was preserva	tive added to bottle	\$?			Yes		N		NA 🗌	
. VOA vials hav	ve zero headspace?				Yes	\checkmark	N	b	No VOA Vials	
). Were any sar	mple containers rece	eived broken?	?		Yes		N	o 🔽	# of preserved bottles checked	
(Note discrepa	ork match bottle labe ancies on chain of c	ustody)			Yes		N	b	for pH:	>12 unless noted)
	correctly identified o		ustody?			\checkmark	No		Adjusted? N()
	t analyses were req					✓	N	10 10 10 10 10 10 10 10 10 10 10 10 10 1		JZ1/21/19
	ng times able to be ustomer for authoriz				Yes	✓	N		Checked by:	121/24/19
pecial Handl	ling (if applicab	le)								
	otified of all discrepa		s order?	?	Yes		N	•	NA 🔽	
Person	Notified:			Date						
By Who	om:			Via:	eM	ail 🔽] Phone [Fax	In Person	
Regardi	ing:									
Client Ir	nstructions:									
6. Additional rer	marks:									
7. <u>Cooler Infor</u>	mation									
Cooler No		dition Sea	I Intact	Seal No	Seal D	ate	Signed	l Bv		
1	3.7 Good	Yes					eignet			
2	4.3 Good	Yes		1			The Coll of Coll Coll of Manhatrana			

	AALL ENVIKONMENTAL ANALYSTS LABODATODY	2 4901 Hawkins NF - Alburnerute NM 87109	LC	Tel. 000-040-040-040-040-440-410/ Analvsis Request	↓ ↓ ↓	י 2C יי גו גו ² אוצס	ÞO⁴ SIW	V	\ О 3/8(3/10 3 лс 3 лс 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ло О ³ ³ О ³ ³ О ³ ⁴ О ³ ⁴ О ³ ⁴ О ³ ⁴ О ³ ⁴	4 A A A A A A A A A A A A A A A A A A A	X / 1 (Me 2801 (Me 28 by (Me 8 by (VC 8 by (VC (12 8081 ВСГ, F ВСГ ВСГ ВСГ ВСГ ВСС ВСС ВСС ВСС ВСС ВСС	cui Juvin	XXX ZOO-	-01,2 /	AVV 1 1 hou -	-005 1 1 1 1 1 1 4 1				Remarks:	C	Date Time	Upplya IIIO MWH and not receive YOAS cannot me also at rated its
Turn-Around Time:	Candard Cush	 Kautman No	Project #:	180061	Droigot Man			Sampler: J. Ferk	AVes	lers.	Cooler Temp(including CF): 2-7°C		Type and # Type	Lano/								Received by: Via:	CINTULAL.	Rederved by: Via: Council	Hollan
Chain-of-Custody Record	Client: Timberwolf End	Mailing Address:		Phone # 575 324-2/24	- avt i me	Alman can com	VStandard	1: D Az Con		(au)			Date Time Matrix Sample Name	(1 020 h)	EMM 3/2/2/1/1	3	U /	10 1335 W	-			Date: Time: Relinquished by	116/4180 10 20	Time: Remquis	1/18/19/18/11/ Janan

Appendix C Geotechnical Reports



February 11, 2019

Jim Foster, President

Timberwolf Environmental 691 CR233, Suite B-4 Durango, Colorado 81301

RE: Kaufman #1 - Laboratory Results San Juan County, New Mexico GEOMAT Project No. 185-3187

Dear Mr. Foster,

GEOMAT Inc. (GEOMAT) has completed the laboratory testing services for the Kaufman #1 environmental exploration work performed on January 18, 2019. As requested, after installing six (6) monitor wells at the site, GEOMAT collected two (2) ring samples, Lab Nos. 7698 and 7699 from 5.5'-6' and 13.5'-14' below ground surface, respectively.

The single test boring sampled, MW-04-D, is the twin of MW-04 and presented minor difficulties with respect to recovery due to site conditions. However, sufficient sample was retrieved such that we were able to perform moisture-density analysis locally at our lab while conveying the majority of the sample recovered by the rings to an outside laboratory for the hydraulic conductivity (ASTM D5084) and specific gravity analysis. Results from both of these analyses are attached for your use.

Thank you for the opportunity to be of service to you on this project. We appreciate your business and look forward to assisting you further in the future. Should you have any questions regarding the attached data, please do not hesitate to contact us.

Sincerely yours, GEOMAT Inc.

Robert "Bob" Flegal, P.E. Senior Engineer/Drilling Manager

Copies to: Addressee (1) via email.

915 Malta Avenue 🔶 Farmington, NM 87401 🔹 Tel (505) 327-7928 🔶 Fax (505) 326-5721

MOISTURE - DENSITY WORKSHEET

Project Nu	Project Number: 185-3187	3187			Project Name	:: La Plata De	Project Name: La Plata Delineation - Timberwolf	herwolf		
				Density		Moisture				
Lab Number	Borehole No.	Sample Depth <u>(ft.)</u>	# of Rings	Wt of Rings + Soil (gm)	Tare	Tare & Wet Soil	Tare & Dry Soil	Moisture (%)	Soll wet Density (pcf)	Soli Dry Density (pcf)
7698	B-1	5.5 - 6.0	9	1224.8	178.98	315.08	303.37	9.4%	131.0	119.7
2699	B-1	13.5 - 14.0	9	1138.52	190.64	289.06	276.02	15.3%	119.1	103.3
	NOTE	E: Densities are	e underst	NOTE: Densities are understated due to rings not being completely full	not being com	pletely full				
		Samples coi	ntain grav	Samples contain gravel thus unable to trim ends flush	o trim ends flus.	۲				



Client:	GEOMAT, Inc.			Report Date: Febru	uary 05, 2019
	915 Malta Avenue				
	Farmington, NM	87401-		Project #: 18-51	19-01996
	0			Work Order #: 13	
Attn:	Nothan Compton			Lab #: 19-00	030-01
	Nathan Compton			Sampled By: Clien	
Project Name:	2018-19 Geomat Ir	nc. Misc. Testing		Date Sampled: 1/17/	
				Visual Description of GEO	
	Albuquerque, NM			Material:	
				Sample Source: B-1 @	£.5-6.0
Project Manager:	Jesse Boam		SOILS / AGGREGAT	TES	
Measurement of H	Ivdraulic Conductiv	vity of Saturated Por	ous Materials Using a	Flexible Wall Permeameter (ASTM D5084-16)
			Method: C	,	
Sample Preparation	on: Ring Sample				
Compaction Meth	0 1				
·					
Initial Diameter (ci	m): 6.07			Final Diameter (cm):	6.07
Initial Length (cm)	7.75			Final Length (cm):	7.67
Initial Moisture:	5.4%			Final Moisture:	11.1%
Initial Unit Weight	(pcf): 127.0			Final Unit Weight (pcf):	128.3
Initial Volume (in ³)				Final Volume (in ³):	13.5
Initial Degree of S				Final Degree of Saturation:	97%
0				5	
Permeant Liquid:		City Water			
Magnitude of Tota	al Backpressure:	18.0			
Effective Stress:	a Buokpressure.	2.0			
Range of Hydraul	ic Gradient Used:	1.85 To 2.44			
Specific Gravity(A		2.686			
opoonio aratity(/		2.000		Corrected	
		Time		Hydraulic	
		Interval		Conductivity	
		(sec)		(cm/sec)	
		8		1.04E-03	
		6		1.07E-03	
		7		1.03E-03	
		9		9.98E-04	
			Average:	1.0E-03	
			5		

Note: All final sample dimensions are subject to sample deformation caused by exsolution of air in pore water and handling during removal from cell.

Reviewed By:		Bion		 	
Distribution:	Client: 🗌	File:	Supplier:	Email: 🗌	Other:
AMEC Environment a 8519 Jefferson NE Albuquerque, NM 8 Tel 5058211801		, Inc.			

Fax 5058217371

www.amec.com



Client:	GEOMAT, Inc.			Report Date: Febru	ary 06, 2019
	915 Malta Avenue				
	Farmington, NM	87401-		Project #: 18-51	9-01996
	0 /			Work Order #: 13	
Attn:	Nathan Compton			Lab #: 19-00	30-02
	•			Sampled By: Client	
Project Name:	2018-19 Geomat li	nc. Misc. Testing		Date Sampled: 1/17/2	
				Visual Description of GEO	
	Albuquerque, NM			Material:	
				Sample Source: B-1 @	0 13.5-14.0
Project Manager:	Jesse Boam		SOILS / AGGREGAT	ES	
Measurement of H	Ivdraulic Conducti	vity of Saturated Por	ous Materials Using a	Flexible Wall Permeameter (A	ASTM D5084-16)
	.,	,	Method: C	(.	
Sample Preparati	on: Ring Sample		•		
Compaction Meth	0 1				
Initial Diameter (c	m): 6.13			Final Diameter (cm):	6.13
Initial Length (cm)	,			Final Length (cm):	7.71
Initial Moisture:	, 16.5%	, 0		Final Moisture:	18.8%
Initial Unit Weight				Final Unit Weight (pcf):	109.2
Initial Volume (in ³				Final Volume (in ³):	13.9
Initial Degree of S				Final Degree of Saturation:	97%
	00/0			·	0170
Dormoont Liquid.		O'the Marker			
Permeant Liquid:		City Water			
Magnitude of Tota Effective Stress:	ai backpressure:	33.0			
	lie Credient Heed.	2.0 1.70 To 2.10			
	lic Gradient Used:				
Specific Gravity(A	ASTIN D054):	2.643		Corrected	
		Time		Hydraulic	
		Interval		Conductivity	
		(sec)		(cm/sec)	
		. ,			
		6		2.41E-03	
		8		2.44E-03	
		6		2.34E-03	
		6		2.25E-03	
			Average:	2.4E-03	

Note: All final sample dimensions are subject to sample deformation caused by exsolution of air in pore water and handling during removal from cell.

	- Te) <u> </u>	5) gue		
Reviewed By:					 	
Distribution:	Client: 🗌	File:		Supplier:	Email:	Other:
AMEC Environment	& Infrastructure,	Inc.				
8519 Jefferson NE						
Albuquerque, NM 8	7113					
Tel 5058211801						

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Appendix D

Attached Tables	Table D-1. Groundwater Stabilization Parameters
	Table D-2. Groundwater Analytical Results – General Chemistry
	Table D-3. Groundwater Analytical Results – RCRA-8 Metals
	Table D-4. Groundwater Analytical Results – Volatile Organic Compounds
	Table D-5. Groundwater Analytical Results – Semi-volatile Organic Compounds

Table D-1. Groundwater Stabilization ParametersKaufman No. 1 ReleaseHilcorp Energy CompanySan Juan County, New Mexico

Well ID	Amount Purged (gallons) *	Depth to Water (ft bgs)	Temperature (°C)	Disolved Oxygen (mg/L)	Electric Conductivity (mS/cm)	рН	Oxidation Reduction Potential (mV)
	25	4.74	12.2	0.21	3.84	6.91	74.8
MW1	26	4.68	12.2	0.2	3.84	6.92	74.4
	27	4.68	12.2	0.21	3.85	6.9	74
	21	5.95	6.8	0.84	4.49	6.92	104.1
MW2	22	5.94	6.8	0.86	4.49	6.92	103.3
	23	5.95	6.8	0.88	4.49	6.92	102.2
	22	5.58	9.4	0.28	4.63	7.14	-24.8
MW3	23	5.58	9.5	0.25	4.62	7.13	-28.4
	24	5.58	9.5	0.24	4.62	7.13	-31.6
	16	6.45	9.6	0.31	4.01	6.96	37
MW4	17	6.46	9.6	0.28	4	6.96	34
	18	6.46	9.6	0.27	4	6.96	32.1
	13	6.78	9.2	0.26	3.94	7.13	-2.7
MW5	14	6.78	8.7	0.22	3.94	7.12	-4.6
	15	6.74	8.6	0.21	3.94	7.11	-5.6
MW6	Init	ial DTW: 5.34 ft; W	ell pumped dry a	at 11.5 gallons, allow	ved to recharge to 5.82 f	t and sampled @	2 1335.

* - 10 gallons were purged prior to low flow to develop the monitor wells

ft bgs - feet below ground surface

°C - degrees celsius

mg/L - milligrams per liter

mS/cm - millisiemens per centimeter

mV - millivolts

Table D-2. Groundwater Analytical Results - General ChemistryKaufman No. 1 ReleaseHilcorp Energy CompanySan Juan County, New Mexico

ID	Date	Total Disolved Specific					Anions	3		
Sample ID	Date	Solids (mg/kg)	Conductance (mmhos/cm)	Fluoride	Chloride	Nitrate	Bromide	Nitrogen	Phosphorus	Sulfate
MW1	01/18/19	3,130	3.6	< 1.0	130	< 1.0 ^H	< 1.0	< 1.0 ^H	< 5.0 ^H	1,700
Regulator	y Criteria*	1,000 ²		1.6 ¹		10 ¹	-			600 ²

¹ Human health standard

² Domestic Water Suppy Standard

^H Sample analyzed out of hold time

-- no applicable criteria

Table D-3. Groundwater Analytical Data - RCRA 8 Metals Kaufman No. 1 Release Hilcorp Energy Company San Juan County, New Mexico

Sample ID	RCRA-8 (mg/L)								
Sample ID	Date	Arsenic	Barium	Cadium	Chromium	Lead	Mercury	Selenium	Silver
MW1	01/18/19	< 0.02	0.079	< 0.002	< 0.006	< 0.005	< 0.0002	< 0.05	0.0068
Regulatory C	riteria ¹	0.10	1.00	0.01	0.05	0.05	0.002	0.05	0.05

RCRA - Resouce Conservation and Recovery Act mg/L - milligrams per liter

¹ Human health standard

Table D-4. Groundwater Analytical Data - Volatile Organic Compounds Kaufman No. 1 Hilcorp Energy Company San Juan County, New Mexico

Volatile Organic Compounds	MW-1 (mg/L)	MW-2 (mg/L)	MW-3 (mg/L)	MW-4 (mg/L)	MW-5 (mg/L)	MW-6 (mg/L)	Regulatory Criteria ¹ (mg/L)
Benzene	0.074	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.01
Toluene	0.35	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.75
Ethylbenzene	0.027	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.75
Methyl tert-butyl ether (MTBE)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2,4-Trimethylbenzene	0.032	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,3,5,-Trimethylbenzene	0.015	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2-Dichloroethane (EDC)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.01
1,2-Dibromoethane (EDB)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Naphthalene	0.0032	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
1-Methylnaphthalene	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	
2-Methylnaphthalene	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	
Acetone	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Bromobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Bromodichloromethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Bromoform	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Bromomethane	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	
2-Butanone	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Carbon disulfide	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Carbon Tetrachloride	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.01
Chlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Chloroethane	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
Chloroform	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.1
Chloromethane	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	
2-Chlorotoluene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
4-Chlorotoluene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
cis-1,2-DCE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
cis-1,3- Dichloropropene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2-Dibromo-3-chloropropane	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
Dibromochloromethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Dibromomethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2-Dichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	

Table D-4. Groundwater Analytical Data - Volatile Organic Compounds Kaufman No. 1 Hilcorp Energy Company San Juan County, New Mexico

Volatile Organic Compounds	MW-1 (mg/L)	MW-2 (mg/L)	MW-3 (mg/L)	MW-4 (mg/L)	MW-5 (mg/L)	MW-6 (mg/L)	Regulatory Criteria ¹ (mg/L)
1,3-Dichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,4-Dichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Dichlorodifluoromethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,1-Dichloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.025
1,1-Dichloroethene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2-Dichloropropane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,3-Dichloropropane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
2,2-Dichloropropane	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
1,1-Dichloropropene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Hexachlorobutadiene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
2-Hexanone	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Isopropylbenzene	0.0031	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
4-Isopropyltoluene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
4-Methyl-2-pentanone	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Methylene Chloride	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.1
n-Butylbenzene	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	
n-Propylbenzene	0.0039	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
sec-Butylbenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Styrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
tert-Butylbenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0022	
1,1,1,2-Tetrachloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,1,2,2-Tetrachloroethane	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.01
Tetrachloroethene (PCE)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.02
trans-1,2- DCE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
trans-1,3-Dichloropropene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2,3-Trichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2,4-Trichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,1,1-Trichloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.06
1,1,2-Trichloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.01
Trichloroethene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Trichlorofluoromethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2,3-Trichloropropane	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
Vinyl Chloride	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
Xylenes, Total	0.33	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	0.62

mg/L - milligrams per liter

¹ Human health standard

Table D-5. Groundwater Analytical Data - Semi-volatile Organic Compounds Kaufman No. 1 Hilcorp Energy Company San Juan County, New Mexico

Semi-Volatile Organic Compounds	MW-1 (mg/L)	Regulatory Criteria
Acenaphthene	< 0.01	
Acenaphthylene	< 0.01	
Aniline	< 0.01	
Anthracene	< 0.01	
Azobenzene	< 0.01	
Benz(a)anthracene	< 0.01	
Benzo(a)pyrene	< 0.01	0.0007 ¹
Benzo(b)fluoranthene	< 0.01	
Benzo(g,h,i)perylene	< 0.01	
Benzo(k)fluoranthene	< 0.01	
Benzoic acid	< 0.02	
Benzyl alcohol	< 0.01	
Bis(2-chloroethoxy)methane	< 0.01	
Bis(2-chloroethyl)ether	< 0.01	
Bis(2-chloroisopropyl)ether	< 0.01	
Bis(2-ethylhexyl)phthalate	< 0.01	
4-Bromophenyl phenyl ether	< 0.01	
Butyl benzyl phthalate	< 0.01	
Carbazole	< 0.01	
4-Chloro-3-methylphenol	< 0.01	
4-Chloraniline	< 0.01	
2-Chloronaphthalene	< 0.01	
2-Chlorophenol	< 0.01	
4-Chlorophenyl phenyl ether	< 0.01	
Chrysene	< 0.01	
Di-n-butyl phthalate	< 0.01	
Di-n-octyl phthalate	< 0.01	
Dibenz(a,h)anthracene	< 0.01	
Dibezofuran	< 0.01	
1,2-Dichlorobenzene	< 0.01	
1,3-Dichlorobenzene	< 0.01	
1,4-Dichlorobenzene	< 0.01	
3,3'-Dichlorobenzidine	< 0.01	
Diethyl phthalate	< 0.01	
Dimethyl phthalate	< 0.01	
2,4-Dichlorophenol	< 0.02	
2,4-Dimethylphenol	< 0.01	
4,6-Dinitro-2-methylphenol	< 0.02	

Table D-5. Groundwater Analytical Data - Semi-volatile Organic Compounds Kaufman No. 1 Hilcorp Energy Company San Juan County, New Mexico

Semi-Volatile Organic Compounds	MW-1 (mg/L)	Regulatory Criteria
2,4-Dinitrophenol	< 0.02	
2,4-Dinitrotoluene	< 0.01	
2,6-Dinitrotoluene	< 0.01	
Fluoranthene	< 0.01	
Fluorene	< 0.01	
Hexachlorobenzene	< 0.01	
Hexachlorobutadiene	< 0.01	
Hexachlorocyclopentadiene	< 0.01	
Hexachloroethane	< 0.01	
Indeno(1,2,3-cd)pyrene	< 0.01	
Isophorone	< 0.01	
1-Methylnaphthalene	< 0.01	
2-Methylnaphthalene	< 0.01	
2-Methylphenol	< 0.01	
3+4-Methylphenol	< 0.01	
N-Nitrosodi-n-propylamine	< 0.01	
N-Nitrosodimethylamine	< 0.01	
N-Nitrosodiphenylamine	< 0.01	
Naphthalene	< 0.01	
2-Nitroaniline	< 0.01	
3-Nitroaniline	< 0.01	
4Nitroaniline	< 0.01	
Nitrobenzene	< 0.01	
2-Nitrophenol	< 0.01	
4-Nitrophenol	< 0.01	
Pentachlorophenol	< 0.02	
Phenanthrene	< 0.01	
Phenol	< 0.01	0.005 ²
Pyrnen	< 0.01	
Pyridine	< 0.01	
1,2,4-Trichlorobenzene	< 0.01	
2,4,5-Tricholrophenol	< 0.01	
2,4,6-Trichlorophenol	< 0.01	

mg/L - milligrams per liter

¹ Human health standard

² Domestic water suppy santdard

Appendix D

Attached Tables	Table D-1. Groundwater Stabilization Parameters
	Table D-2. Groundwater Analytical Results – General Chemistry
	Table D-3. Groundwater Analytical Results – RCRA-8 Metals
	Table D-4. Groundwater Analytical Results – Volatile Organic Compounds
	Table D-5. Groundwater Analytical Results – Semi-volatile Organic Compounds

Table D-1. Groundwater Stabilization Parameters Kaufman No. 1 Release Hilcorp Energy Company San Juan County, New Mexico

Well ID	Amount Purged (gallons) *	Depth to Water (ft bgs)	Temperature (°C)	Disolved Oxygen (mg/L)	Electric Conductivity (mS/cm)	рН	Oxidation Reduction Potential (mV)
	25	4.74	12.2	0.21	3.84	6.91	74.8
MW1	26	4.68	12.2	0.2	3.84	6.92	74.4
	27	4.68	12.2	0.21	3.85	6.9	74
	21	5.95	6.8	0.84	4.49	6.92	104.1
MW2	22	5.94	6.8	0.86	4.49	6.92	103.3
	23	5.95	6.8	0.88	4.49	6.92	102.2
	22	5.58	9.4	0.28	4.63	7.14	-24.8
MW3	23	5.58	9.5	0.25	4.62	7.13	-28.4
	24	5.58	9.5	0.24	4.62	7.13	-31.6
	16	6.45	9.6	0.31	4.01	6.96	37
MW4	17	6.46	9.6	0.28	4	6.96	34
	18	6.46	9.6	0.27	4	6.96	32.1
	13	6.78	9.2	0.26	3.94	7.13	-2.7
MW5	14	6.78	8.7	0.22	3.94	7.12	-4.6
	15	6.74	8.6	0.21	3.94	7.11	-5.6
MW6	Init	ial DTW: 5.34 ft; W	ell pumped dry a	at 11.5 gallons, allov	wed to recharge to 5.82 f	t and sampled @	2 1335.

* - 10 gallons were purged prior to low flow to develop the monitor wells

ft bgs - feet below ground surface

°C - degrees celsius

mg/L - milligrams per liter

mS/cm - millisiemens per centimeter

mV - millivolts

Table D-2. Groundwater Analytical Results - General ChemistryKaufman No. 1 ReleaseHilcorp Energy CompanySan Juan County, New Mexico

ID	Date	Total Disolved Solids (mg/kg)	Specific Conductance (mmhos/cm)	Anions								
Sample ID				Fluoride	Chloride	Nitrate	Bromide	Nitrogen	Phosphorus	Sulfate		
MW1	01/18/19	3,130	3.6	< 1.0	130	< 1.0 ^H	< 1.0	< 1.0 ^H	< 5.0 ^H	1,700		
Regulator	y Criteria*	1,000 ²		1.6 ¹		10 ¹	-			600 ²		

¹ Human health standard

² Domestic Water Suppy Standard

^H Sample analyzed out of hold time

-- no applicable criteria

Table D-3. Groundwater Analytical Data - RCRA 8 Metals Kaufman No. 1 Release Hilcorp Energy Company San Juan County, New Mexico

Sample ID	Date	RCRA-8 (mg/L)								
		Arsenic	Barium	Cadium	Chromium	Lead	Mercury	Selenium	Silver	
MW1	01/18/19	< 0.02	0.079	< 0.002	< 0.006	< 0.005	< 0.0002	< 0.05	0.0068	
Regulatory Criteria ¹		0.10	1.00	0.01	0.05	0.05	0.002	0.05	0.05	

RCRA - Resouce Conservation and Recovery Act mg/L - milligrams per liter

¹ Human health standard

Table D-4. Groundwater Analytical Data - Volatile Organic Compounds Kaufman No. 1 Hilcorp Energy Company San Juan County, New Mexico

Volatile Organic Compounds	MW-1 (mg/L)	MW-2 (mg/L)	MW-3 (mg/L)	MW-4 (mg/L)	MW-5 (mg/L)	MW-6 (mg/L)	Regulatory Criteria ¹ (mg/L)
Benzene	0.074	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.01
Toluene	0.35	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.75
Ethylbenzene	0.027	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.75
Methyl tert-butyl ether (MTBE)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2,4-Trimethylbenzene	0.032	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,3,5,-Trimethylbenzene	0.015	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2-Dichloroethane (EDC)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.01
1,2-Dibromoethane (EDB)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Naphthalene	0.0032	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
1-Methylnaphthalene	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	
2-Methylnaphthalene	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	
Acetone	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Bromobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Bromodichloromethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Bromoform	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Bromomethane	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	
2-Butanone	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Carbon disulfide	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Carbon Tetrachloride	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.01
Chlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Chloroethane	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
Chloroform	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.1
Chloromethane	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	
2-Chlorotoluene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
4-Chlorotoluene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
cis-1,2-DCE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
cis-1,3- Dichloropropene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2-Dibromo-3-chloropropane	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
Dibromochloromethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Dibromomethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2-Dichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	

Table D-4. Groundwater Analytical Data - Volatile Organic Compounds Kaufman No. 1 Hilcorp Energy Company San Juan County, New Mexico

Volatile Organic Compounds	MW-1 (mg/L)	MW-2 (mg/L)	MW-3 (mg/L)	MW-4 (mg/L)	MW-5 (mg/L)	MW-6 (mg/L)	Regulatory Criteria ¹ (mg/L)
1,3-Dichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,4-Dichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Dichlorodifluoromethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,1-Dichloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.025
1,1-Dichloroethene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2-Dichloropropane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,3-Dichloropropane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
2,2-Dichloropropane	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
1,1-Dichloropropene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Hexachlorobutadiene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
2-Hexanone	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Isopropylbenzene	0.0031	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
4-Isopropyltoluene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
4-Methyl-2-pentanone	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Methylene Chloride	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.1
n-Butylbenzene	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	
n-Propylbenzene	0.0039	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
sec-Butylbenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Styrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
tert-Butylbenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0022	
1,1,1,2-Tetrachloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,1,2,2-Tetrachloroethane	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.01
Tetrachloroethene (PCE)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.02
trans-1,2- DCE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
trans-1,3-Dichloropropene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2,3-Trichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2,4-Trichlorobenzene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,1,1-Trichloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.06
1,1,2-Trichloroethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.01
Trichloroethene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Trichlorofluoromethane	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
1,2,3-Trichloropropane	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
Vinyl Chloride	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
Xylenes, Total	0.33	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	0.62

mg/L - milligrams per liter

¹ Human health standard

Table D-5. Groundwater Analytical Data - Semi-volatile Organic Compounds Kaufman No. 1 Hilcorp Energy Company San Juan County, New Mexico

Semi-Volatile Organic Compounds	MW-1 (mg/L)	Regulatory Criteria
Acenaphthene	< 0.01	
Acenaphthylene	< 0.01	
Aniline	< 0.01	
Anthracene	< 0.01	
Azobenzene	< 0.01	
Benz(a)anthracene	< 0.01	
Benzo(a)pyrene	< 0.01	0.0007 ¹
Benzo(b)fluoranthene	< 0.01	
Benzo(g,h,i)perylene	< 0.01	
Benzo(k)fluoranthene	< 0.01	
Benzoic acid	< 0.02	
Benzyl alcohol	< 0.01	
Bis(2-chloroethoxy)methane	< 0.01	
Bis(2-chloroethyl)ether	< 0.01	
Bis(2-chloroisopropyl)ether	< 0.01	
Bis(2-ethylhexyl)phthalate	< 0.01	
4-Bromophenyl phenyl ether	< 0.01	
Butyl benzyl phthalate	< 0.01	
Carbazole	< 0.01	
4-Chloro-3-methylphenol	< 0.01	
4-Chloraniline	< 0.01	
2-Chloronaphthalene	< 0.01	
2-Chlorophenol	< 0.01	
4-Chlorophenyl phenyl ether	< 0.01	
Chrysene	< 0.01	
Di-n-butyl phthalate	< 0.01	
Di-n-octyl phthalate	< 0.01	
Dibenz(a,h)anthracene	< 0.01	
Dibezofuran	< 0.01	
1,2-Dichlorobenzene	< 0.01	
1,3-Dichlorobenzene	< 0.01	
1,4-Dichlorobenzene	< 0.01	
3,3'-Dichlorobenzidine	< 0.01	
Diethyl phthalate	< 0.01	
Dimethyl phthalate	< 0.01	
2,4-Dichlorophenol	< 0.02	
2,4-Dimethylphenol	< 0.01	
4,6-Dinitro-2-methylphenol	< 0.02	

Table D-5. Groundwater Analytical Data - Semi-volatile Organic Compounds Kaufman No. 1 Hilcorp Energy Company San Juan County, New Mexico

Semi-Volatile Organic Compounds	MW-1 (mg/L)	Regulatory Criteria
2,4-Dinitrophenol	< 0.02	
2,4-Dinitrotoluene	< 0.01	
2,6-Dinitrotoluene	< 0.01	
Fluoranthene	< 0.01	
Fluorene	< 0.01	
Hexachlorobenzene	< 0.01	
Hexachlorobutadiene	< 0.01	
Hexachlorocyclopentadiene	< 0.01	
Hexachloroethane	< 0.01	
Indeno(1,2,3-cd)pyrene	< 0.01	
Isophorone	< 0.01	
1-Methylnaphthalene	< 0.01	
2-Methylnaphthalene	< 0.01	
2-Methylphenol	< 0.01	
3+4-Methylphenol	< 0.01	
N-Nitrosodi-n-propylamine	< 0.01	
N-Nitrosodimethylamine	< 0.01	
N-Nitrosodiphenylamine	< 0.01	
Naphthalene	< 0.01	
2-Nitroaniline	< 0.01	
3-Nitroaniline	< 0.01	
4Nitroaniline	< 0.01	
Nitrobenzene	< 0.01	
2-Nitrophenol	< 0.01	
4-Nitrophenol	< 0.01	
Pentachlorophenol	< 0.02	
Phenanthrene	< 0.01	
Phenol	< 0.01	0.005 ²
Pyrnen	< 0.01	
Pyridine	< 0.01	
1,2,4-Trichlorobenzene	< 0.01	
2,4,5-Tricholrophenol	< 0.01	
2,4,6-Trichlorophenol	< 0.01	

mg/L - milligrams per liter

¹ Human health standard

² Domestic water suppy santdard

PUBLIC NOTICE OF STAGE 1 ABATEMENT PLAN (AP-138)

Operator:	Hilcorp Energy Company 382 Road 3100 Aztec, New Mexico 87410
Site name and location:	Kaufman No. 1 (AP-138) API: 30-045-10174 Legal Description: SE ¹ / ₄ , NE ¹ / ₄ , Sec. 33, T31N, R13W Latitude: 36.8598137 Longitude: -108.2037506 The Kaufman No. 1 ("Site") is situated on federal land that is managed by the Bureau of Land Management. The Site is located east of the La Plata River, approximately 9.1 miles north of Farmington in San Juan County, New Mexico.

Source, impacted media, and Stage 1 Abatement Plan

On or about 11/16/18, a release of approximately 8 barrels of oil and 10 barrels of produced water occurred due to a tank overflow. The release impacted the soil vadose zone and underlying groundwater; no surface water was impacted. Production equipment was removed to facilitate excavation and disposal of affected soil.

The Stage 1 Abatement Plan is proposed to: 1) investigate the vadose zone to ensure that any remaining affected soil does not pose a threat to either the underlying groundwater or any threatened and endangered species, 2) determine the location of area water wells, 3) conduct additional groundwater analysis to determine native salinity levels of groundwater at the Site, 4) conduct a hydrogeologic assessment to study the relationship between the Site's groundwater and the La Plata River, 5) establish a quality assurance plan, and 6) establish a monitoring program for Site groundwater.

Director's procedure for making final determination

The New Mexico Oil and Gas Conservation Division will accept written comments and requests for consideration on the stage 1 abatement plan if received within 30 days of this public notice. The Director will approve or deny the stage 1 abatement plan following the 30 day public notice and within 60 days from receipt of the abatement plan.

Public Availability

A copy of the Stage 1 Abatement Plan can be viewed at the Division's Santa Fe Office located at 1220 South St. Francis Dr., Santa Fe, NM 87505 or the Division's District 3 Office located at 1000 Rio Brazos Road, Aztec, NM 87410. The abatement plan is also viewable online via the NMOCD's website: www.emnrd.state.nm.us/ocd

Public Comments

The division will accept written public comments and requests for consideration if received within 30 days from the date of this publication. Please address any comments or requests to:

Cory Smith, Environmental Specialist New Mexico Oil Conservation Division – District 3 1000 Rio Brazos Road Aztec, NM 87410

For additional information, please contact:

Jennifer Deal, Environmental Specialist Hilcorp Energy Company 382 Road 3100 Aztec, New Mexico 87410 (505) 599-3400

Legal Description	Parcel No.	Last Name	First Name	Prefix	Owner Address	City	State	Zip
NE CORNER OF NE/4 OF SW/4 OF SEC 27	2075181329324	Dunn	Steven and Melinda	Mr.	PO BOX 298	La Plata	NM	87418
NW CORNER OF NW/4 SW/4 OF SEC 27	2075181484217	Shorter	Marilyn	Ms.	1000NM 170	La Plata	NM	87418
NW CORNER OF NW/4 SW/4 OF SEC 27	2075181480242	Long	Billy and Loydeen		PO BOX 516	La Plata	NM	87418
NW CORNER OF NW/4 OF SW/4 OF SEC 27	2075181502231	Williams	Shanna	Ms.	1006 NM 170	La Plata	NM	87418
NW CORNER OF NW/4 OF SW/4 OF SEC 27	2075181515249	Weinstein	Richard and Janet		PO BOX 403	La Plata	NM	87418
SW CORNER OF NW/4 SW/4 OF SEC 27	2075181406182	North	Jim and Colleen		998 NM 170	La Plata	NM	87418
SE CORNER OF SE/4 OF SW/4 OF SEC 28	2075181462066	Myers	Jackie	Ms.	PO BOX 477	La Plata	NM	87418
SE CORNER OF SE/4 OF SW/4 OF SEC 28	2075181462066	Wayne	Jon	Mr.	PO BOX 477	La Plata	NM	87418
NW CORNER OF SE/4 OF SE/4 OF SEC 27	2076181040111	Vogler	Lawrence	Mr.	986 NM 170	La Plata	NM	87418
NW CORNER OF SE/4 OF SE/4 OF SEC 28	2076181077087	Vogler	Lawrence	Mr.	987 NM 170	La Plata	NM	87419
NW CORNER OF SE/4 OF SE/4 OF SEC 28	2076181098059	Marion	Randy	Mr.	970 NM 170	Farmington	NM	87401
SE CORNER OF NW/4 OF SE/4 OF SEC 28	2076181162028	Mntoya	Anthony, Shawn, and M	/lelissa	966 NM 170	Farmington	NM	87402
NE CORNER OF NE/4 OF NE/4 OF SEC 33	2076180160528	Myers	Jackie	Ms.	PO BOX 477	La Plata	NM	87418
NE CORNER OF NE/4 OF NE/4 OF SEC 33	2076180160528	Wayne	Jon	Mr.	PO BOX 477	La Plata	NM	87418
NE CORNER OF NW/4 OF NE/4 OF SEC 33	2076180177518	Baylock	Elizabeth	Ms.	964 HWY 170	Farmington	NM	87401
NE CORNER OF NW/4 OF NE/4 OF SEC 33	2076180177518	Turner	Thad	Mr.	964 HWY 170	Farmington	NM	87401
SE CORNER OF NE/4 OF NE/4 OF SEC 33	2076180096456	Baylock	Elizabeth	Ms.	964 HWY 170	Farmington	NM	87401
SE CORNER OF NE/4 OF NE/4 OF SEC 33	2076180096456	Turner	Thad	Mr.	964 HWY 170	Farmington	NM	87401
SW CORNER OF NW/4 of NE/4 OF SEC 33	2076180229431	Bees	Gary and Marsha		PO BOX 215	La Plata	NM	87401
NE CORNER OF SW/4 OF NE/4 OF SEC 33	2076180174375	Dalton	Harrry and Theresa		1904 Brookside Drive	Farmignton	NM	87401
SW CORNER OF SW/4 OF NE/4 OF SEC 33	2076180208312	Bees	Gary and Marsha		PO BOX 215	La Plata	NM	87401
SE CORNER OF NE/4 OF NW/4 OF SEC 33	2076180325427	Bees	Gary and Marsha		PO BOX 215	La Plata	NM	87401
NE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180316416	Sundquist	Lance	Mr.	5 Road 1634	Farmington	NM	87401
NE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180304402	Powell	Marx and Mary Kathryn	I	PO BOX 325	Bluff	UT	84512
NE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180294391	Powell	Marx and Mary Kathryn	I	PO BOX 326	Bluff	UT	84513
NE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180282380	Cage	Bryan	Mr.	15 Road 1634	Farmington	NM	87401
NW CORNER OF SE/4 OF NW/4 OF SEC 33	2076180346392		Fshburn and Father LL	С	1816 E Mojave Street	Farmington	NM	87401

Legal Description	Parcel No.	Last Name	First Name	Prefix	Owner Address	City	State	Zip
NW CORNER OF SE/4 OF NW/4 OF SEC 33	2076180357382	Bees	Gary and Marsha		PO BOX 386	La Plata	NM	87401
NE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180341379	Montoya	Sally	Ms.	2605 W Main Street SP 7	' Farmington	NM	87401
NE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180326364	Montoya	Sally	Ms.	2605 W Main Street SP 7	' Farmington	NM	87401
NE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180320334	Fowler	Brent	Mr.	PO BOX 405	La Plata	NM	87418
NE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180297327	Fowler	Brent	Mr.	PO BOX 405	La Plata	NM	87418
NE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180371355	Montoya	Clifford	Mr.	898 NM 170	Farmington	NM	87401
NE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180350339	Montoya	Evangeline	Ms.	898 NM 170	Farmington	NM	87401
SE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180332304	Ridlon	Kenneth	Mr.	16 Road 1636	Farmington	NM	87401
SE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180324293	Kuchera	Jeremy and Rebecca		20 Road 1636	Farmington	NM	87401
SE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180318280	Kuchera	Katherine	Ms.	605 W 24th Street	Farmington	NM	87401
SE CORNER OF SE/4 OF NW/4 OF SEC 33	2076180312269	Watson	David	Mr.	26 Road 1636	Farmington	NM	87401
NE CORNER OF NE/4 OF SW/4 OF SEC 33	2076180308254	Brice	Joe	Mr.	28 Road 1636	Farmington	NM	87401
NE CORNER OF NE/4 OF SW/4 OF SEC 33	2076180308254	Griffith	Lynett	Ms.	28 Road 1636	Farmington	NM	87401
NE CORNER OF NE/4 OF SW/4 OF SEC 33	2076180304244	Gordon	Crystal	Ms.	30 Road 1636	Farmington	NM	87401
SE CORNER OF NE/4 OF SW/4 OF SEC 33	2076180300190	Andrews	Frank and Renee		32 Road 1636	Farmington	NM	87401
NW CORNER OF NW/4 OF SW/4 OF SEC 33	2076180341212		Nickles Brothers Inc		1412 HWY 170	La Plata	NM	87418
SW CORNER OF NW/4 OF SW/4 OF SEC 33	2076180351170	Haley	Michael or Loretta		38 Road 1636	Farmington	NM	87401
SW CORNER OF NW/4 OF SW/4 OF SEC 33	2076180381180	Klitzke	Donald III and Brook		40 Road 1636	Farmington	NM	87401
SW CORNER OF NW/4 OF SW/4 OF SEC 33	2076180389206	Malone	Michael and Virginia		42 Road 1636	Farmington	NM	87401
NW CORNER OF NE/4 OF SW/4 OF SEC 33	2076180395222	Stevens	Jerry	Mr.	46 Road 1636	Farmington	NM	87401
NW CORNER OF NE/4 OF SW/4 OF SEC 33	2076180395222	McCormack	Mary	Ms.	46 Road 1636	Farmington	NM	87401
NW CORNER OF NE/4 OF SW/4 OF SEC 33	2076180401240	Benally	Chester and Elovonee		50 Road 1636	Farmington	NM	87401
NW CORNER OF NE/4 OF SW/4 OF SEC 33	2076180406257	Stockton	Jefferey and Cindy		54 Road 1636	Farmington	NM	87401
NE CORNER OF NE/4 OF SW/4 OF SEC 33	2076180351261	Perkins	Glen and Teresa		PO BOX 1091	Farmington	NM	87499
NE CORNER OF NE/4 OF SW/4 OF SEC 33	2076180346248	Lee	Ginger	Ms.	4108 Saint Michaels Dr	Farmignton	NM	87401
NE CORNER OF NE/4 OF SW/4 OF SEC 33	2076180340232	Murphy	Jennifer	Ms.	27 Road 1636	Farmington	NM	87401
NE CORNER OF NE/4 OF SW/4 OF SEC 33	2076180368231	Opperman	Christopher	Mr.	45 Road 1636	Farmington	NM	87401

Legal Description	Parcel No.	Last Name	First Name	Prefix	Owner Address	City	State	Zip
NE CORNER OF NE/4 OF SW/4 OF SEC 33	2076180374250	Earp	Ronald and Barbara		49 Road 1636	Farmington	NM	87401
NE CORNER OF NE/4 OF SW/4 OF SEC 33	2076180381270	Vasquez	Fernando and Maria		53 Road 1636	Farmington	NM	87401
SW CORNER OF SE/4 OF NW/4 OF SEC 33	2076180388283		Desert Investments		7 Road 5795	Farmington	NM	87401
SW CORNER OF SE/4 OF NW/4 OF SEC 33	2076180365296	Fuller	Lonnie and Wendy		13 Road 1636	Farmington	NM	87401
SW CORNER OF SE/4 OF NW/4 OF SEC 33	2076180361283	Gould	Shannon	Ms.	17 Road 1636	Farmington	NM	87401
SW CORNER OF SE/4 OF NW/4 OF SEC 33	2076180355271	Buckley	Rebecca	Ms.	19 Road 1636	Farmington	NM	87401
SW CORNER OF SE/4 OF NW/4 OF SEC 33	2076180398348	Truby	Ruth	Ms.	5 Road 1636	Farmington	NM	87401
SW CORNER OF SE/4 OF NW/4 OF SEC 33	2076180386336	Truby	Ruth	Ms.	9 Road 1636	Farmington	NM	87401
SW CORNER OF SE/4 OF NW/4 OF SEC 33	2076180375328	Truby	Ruth	Ms.	62 Road 1636	Farmington	NM	87401
SE CORNER OF SW/4 OF NW/4 OF SEC 33	2076180411302	Martin	Eugene	Mr.	876 HWY 170	Farmington	NM	87401
SE CORNER OF SW/4 OF NW/4 OF SEC 33	2076180431276		P and P Properties		785 NM 170	Farmington	NM	87401
SE CORNER OF SW/4 OF NW/4 OF SEC 33	2076180456251	Asplund	Eric	Mr.	PO BOX 837	Flora Vista	NM	87415
SE CORNER OF SW/4 OF NW/4 OF SEC 33	2076180456251	Curry	Carol	Ms.	PO BOX 837	Flora Vista	NM	87415
SE CORNER OF NW/4 OF SW/4 OF SEC 33	2076180408192	Waybourn	Don and Kathy		PO BOX 326	La Plata	NM	87418
SE CORNER OF NW/4 OF SW/4 OF SEC 33	2076180440191	Waybourn	Don and Kathy		PO BOX 326	La Plata	NM	87418
SE CORNER OF NW/4 OF SW/4 OF SEC 33	2076180471150		R & R Mcgee Holding Co	ompany L	103 Juniper Hill Road	Albuquerque	NM	87122
SW CORNER OF NW/4 OF SW/4 OF SEC 33	2076180504180	Winters	Howell and Vivian		HC62 BOX 809	Aragon	NM	87820
NW CORNER OF NW/4 OF SW/4 OF SEC 33	2076180512247	Symonds	Mathew and Joan		PO BOX 506	Farmington	NM	87499
NE CORNER OF NE/4 OF SE/4 OF SEC 32	2077180066198	Levan	William		444 Long Bow Loop	Los Lunas	NM	87031
NE CORNER OF NE/4 OF SE/4 OF SEC 32	2077180066198	McMillan	Renee		444 Long Bow Loop	Los Lunas	NM	87031
SW CORNER OF SW/4 OF NW/4 OF SEC 33	2076180479288	Symonds	Edward and Margaret		PO BOX 506	Farmington	NM	87499
SW CORNER OF SW/4 OF NW/4 OF SEC 33	2076180518275	Nelson	Raymond and Peggy		17 Road 1639	Farmington	NM	87401
SW CORNER OF SW/4 OF NW/4 OF SEC 33	2076180517300	Emmert	Richard and Kathleen		23 Road 1639	Farmington	NM	87401
SW CORNER OF SW/4 OF NW/4 OF SEC 33	2076180518324	Largent	Willie and Patricia		27 Road 1639	Farmington	NM	87401
SW CORNER OF SW/4 OF NW/4 OF SEC 33	2076180485333	Ashley	Floyd and Dylene		30 Road 1639	Farmington	NM	87401
NE CORNER OF SW/4 OF NW/4 OF SEC 33	2076180518355	Doherty	Cielo and Bryan		36 Road 1639	Farmington	NM	87401
NE CORNER OF SW/4 OF NW/4 OF SEC 33	2076180496364	Doherty	Cielo		36 Road 1639	Farmington	NM	87401

Legal Description	Parcel No.	Last Name	First Name	Prefix	Owner Address	City	State	Zip
NE CORNER OF SW/4 OF NW/4 OF SEC 33	2076180518385	Dearen	Kenny and Shelly		37 Road 1639	Farmington	NM	87401
NE CORNER OF SW/4 OF NW/4 OF SEC 33	2076180494384	Dearen	Kenny and Shelly		37 Road 1639	Farmington	NM	87401
NE CORNER OF SW/4 OF NW/4 OF SEC 33	2076180473384	Henshaw	Christoher and Suzanne		PO BOX 5442	Famrington	NM	87401
NE CORNER OF SW/4 OF NW/4 OF SEC 33	2076180469364	Emery	Sandra	Ms.	42 Road 1639	Farmington	NM	87401
NW CORNER OF SW/4 OF NW/4 OF SEC 33	2076180451384	Johnson	Traci		45 Road 1639	Farmington	NM	87401
NW CORNER OF SW/4 OF NW/4 OF SEC 33	2076180430384	Thelen	Janet	Ms.	PO BOX 3951	Farmington	NM	87401
NW CORNER OF SW/4 OF NW/4 OF SEC 33	2076180398388	Bailey	Mary	Ms.	PO BOX 1186	Farmington	NM	87401
NW CORNER OF SW/4 OF NW/4 OF SEC 33	2076180447366	Gagnebin	James and Neva		1136 N Vine Ave	Farmington	NM	87401
NW CORNER OF SW/4 OF NW/4 OF SEC 33	2076180413364	Yazzie	David Jr and Bertha		10951 N 91st Ave #104	Peoria	AZ	85345
NW CORNER OF SW/4 OF NW/4 OF SEC 33	2076180420342	Quinn	John	Mr.	53 Road 1639	Farmington	NM	87401
NE/4 OF NW/4 OF SEC 33	2076180330476	Bailey	Marky and Louise		PO BOX 1240	Aztec	NM	87410
SW/4 OF SEC 28	2076181396066		Frame Family Trust		PO BOX 261	La Plata	NM	87418
NW/4 OF SE/4 OF SEC 28	2076185330396		Frame Family Trust		PO BOX 261	La Plata	NM	87418
SW CORNER OF SW/4 OF SE/4 OF SEC 28	2076181183063	Musgrove	Kent and Vivian		7 Road 16330	Farmington	NM	87401
SW CORNER OF SW/4 OF SE/4 OF SEC 28	2076181245017	Musgrove	Kent and Vivian		7 Road 16330	Farmington	NM	87401
SW CORNER OF SW/4 OF SE/4 OF SEC 28	2076181235040	Blaylock	Elizabeth	Ms.	9 Road 1636	Farmington	NM	87401
SW CORNER OF SW/4 OF SE/4 OF SEC 28	2076181235040	Turner	Thad	Mr.	9 Road 1636	Farmington	NM	87401
SW CORNER OF SW/4 OF SE/4 OF SEC 28	2076181210051	Blaylock	Elizabeth	Ms.	9 Road 1636	Farmington	NM	87401
SW CORNER OF SW/4 OF SE/4 OF SEC 28	2076181210051	Turner	Thad	Mr.	9 Road 1636	Farmington	NM	87401
SW CORNER OF SW/4 OF SE/4 OF SEC 28	2076181251049	Kimsey	Carol	Ms.	PO BOX 221	La Plata	NM	87418
NW CORNER OF SW/4 OF SE/4 OF SEC 28	2076181247080	Palmgren	Kevin and Andrea		13 Road 1633	Farmington	NM	87401
NW CORNER OF SW/4 OF SE/4 OF SEC 28	2076181247105	Arn	Sam and Roe		PO BOX 381	La Plata	NM	87418
NW CORNER OF SW/4 OF SE/4 OF SEC 28	2076181217118	Arn	Sam and Roe		PO BOX 381	La Plata	NM	87418
NW CORNER OF SW/4 OF SE/4 OF SEC 28	2076181214087	Haley	Stephen and Linda		10 Road 1633	Farmington	NM	87401
NE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181180100	Barry	Stephen and Susan		2A Road 1633	Farmington	NM	87401
NE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181193118	Spencer	Dennis and Sheryle		18 Road 1633	Farmington	NM	87401
NE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181119144	Risenhoover	Edgar and Donna		665 Road 1191	La Plata	NM	87418

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SW CORNER OF NE/4 OF SE/4 OF SEC 28	2076181080166	Rust	Brenda and Larry		670 Road 1191	La Plata	NM	87418
SW CORNER OF NE/4 OF SE/4 OF SEC 28	2076181054171	Gould	Richard	Mr.	985 NM 170	La Plata	NM	87418
SE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181037196		2723 LLC		2725 Isabell Street	Golden	CO	80401
SE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181031219	Bramwell	James and Sandra		PO BOX 55	Chromo	CO	81128
SE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181018205	Wootton	Adelmira and Stephen		2702 Sage Ct	Farmington	NM	87401
NE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181079245	Copia	Alex		1526 S Tower PI	Chandler	AZ	85249
NE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181042233		2723 LLC		2725 Isabell Street	Golden	CO	80401
NE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181039245		2723 LLC		2725 Isabell Street	Golden	CO	80401
NE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181038257		2723 LLC		2725 Isabell Street	Golden	СО	80401
NE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181035268		2723 LLC		2725 Isabell Street	Golden	CO	80401
NE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181007228	Grimes	Steven and Sharon		PO BOX 532	La Plata	NM	87418
NE CORNER OF NE/4 OF SE/4 OF SEC 28	2076181006252	Rambis	Travis	Mr.	14 Road 1499	La Plata	NM	87418
SE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181038279	Noe	Todd and Jean		231 Snowmass Drive	Livermore	СО	80536
SE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181041290	Gherardini	Joseph and Sandra		PO BOX 1543	Farmington	NM	87499
SE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181040306		2723 LLC		2725 Isabell Street	Golden	CO	80401
SE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181036330		2723 LLC		2725 Isabell Street	Golden	CO	80401
SE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181003350	Holt	Brian and Anna		30 Road 1499	La Plata	NM	87418
SE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181004312	Mosley	Clifford and Sharon		22 Road 1499	La Plata	NM	87418
SE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181007292	Dee	Victor and Virginia		20 Road 1499	La Plata	NM	87418
SE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181006274	Waters	Susan	Ms.	16 Road 1499	La Plata	NM	87418
SE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181006274	Moore	Roxie	Ms.	16 Road 1499	La Plata	NM	87418
SW CORNER OF SE/4 OF NE/4 OF SEC 28	2076181081277	Deal	Amanda	Ms.	PO BOX 271	La Plata	NM	87418
SW CORNER OF SE/4 OF NE/4 OF SEC 28	2076181088302	Deal	Lonnie and Robin		PO BOX 422	La Plata	NM	87418
SW CORNER OF SE/4 OF NE/4 OF SEC 28	2076181116318	Deal	Chancy		201 W 30th Street	Farmington	NM	87401
SW CORNER OF SE/4 OF NE/4 OF SEC 28	2076181078331	Carreon	Jessica	Ms.	PO BOX 474	La Plata	NM	87418
NW CORNER OF SE/4 OF NE/4 OF SEC 28	2076181087367	Williams	Owen and Sheila		634 Road 1191	La Plata	NM	87418
NW CORNER OF SE/4 OF NE/4 OF SEC 28	2076181117392	Rusk	Jim and Elizabeth		634 Road 1191	La Plata	NM	87418

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NE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181038346		2723 LLC		2725 Isabell Street	Golden	CO	80401
NE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181040357	Minnehan	Lisa	Ms.	5006 Evergreen Drive	Farmington	NM	87402
NE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181041368	Yeager	Jeremiah and Rebecca		33 Road 1499	La Plata	NM	87418
NE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181045383	Kuzma	Jesse		35 Road	La Plata	NM	87418
NE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181034393	Waipa	Robert and Vicki		PO BOX 558	La Plata	NM	87418
NE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181012393	Garrett	Cole and Heather		38 Road 1499	La Plata	NM	87418
NE CORNER OF SE/4 OF NE/4 OF SEC 28	2076181007376	Flemming	Michael and Dolores		PO BOX 210	La Plata	NM	87418
SW CORNER OF SW/4 OF NW/4 of SEC 27	2075181498333	Lusk	Kenneth and Gwen		5 Road 1497	La Plata	NM	87418
NE CORNER OF SW/4 OF NW/4 OF SEC 27	2075181522395	Brickey	Jefferey and Brnadi		20 Road 1497	La Plata	NM	87418
NE CORNER OF SW/4 OF NW/4 OF SEC 27	2075181519373	Garcia	Ruben	Mr.	22 Road 1497	La Plata	NM	87418
NE CORNER OF SW/4 OF NW/4 OF SEC 27	2075181504394	Harris	Van and Tyra		18 Road 1497	La Plata	NM	87418
NE CORNER OF SW/4 OF NW/4 OF SEC 27	2075181497372	Englert	Lawrence and Kelly		15 Road 1497	La Plata	NM	87418
NE CORNER OF SW/4 OF NW/4 OF SEC 27	2075181485394	Minnehan	Lisa	Ms.	5006 Evergreen Drive	Farmington	NM	87402
NE CORNER OF SW/4 OF NW/4 OF SEC 27	2075181477370	Lamone	Lavina		PO BOX 360	La Plata	NM	87418
NW CORNER OF SW/4 OF NW/4 OF SEC 27	2075181459369	Butt	Jeremey and Shelly		992 S 4th Ave Unit 100	Brighton	СО	80601
NW CORNER OF SW/4 OF NW/4 OF SEC 27	2075181460395	Anderson	Chad and Taffnie		4 Road 1497	La Plata	NM	87418
NW CORNER OF SW/4 OF NW/4 OF SEC 27	2075181443380	Bees	Gary and Marsha		PO BOX 215	La Plata	NM	87418
NE CORNER OF SW/4 OF SW/4 OF SEC 33	2078180198264		Mcgee Ranches LTD		767 NM 170	Farmington	NM	87401