

Prepared For

**K.P. KAUFFMAN COMPANY, INC.
WORLD TRADE CENTER
1675 BROADWAY, SUITE 2800
DENVER, CO 80202-4825**

**GROUNDWATER INVESTIGATION FOR
LONGMONT FARMS UNIT #5 FLOWLINE
WELD COUNTY ROADS 7 & 16
FREDERICK, WELD COUNTY, COLORADO**

**Date Issued: July 27, 2021
APEX Project Number 1-0025.038.00**

Prepared By

**APEX CONSULTING SERVICES, INC.
P.O. BOX 369
LOUISVILLE, CO 80027-0369**

July 27, 2021

Mr. Jeremy Kauffman
K.P. Kauffman Company, Inc.
World Trade Center
1675 Broadway, Suite 2800
Denver, CO 80202-4825

RE: Groundwater Investigation For Longmont Farms Unit #5 Flowline Weld County Roads 7 & 16, Frederick, Weld County, Colorado

Dear Mr. Kauffman:

Apex Consulting Services, Inc. is pleased to provide the results of our Groundwater Investigation for the Longmont Farms Unit #5 Flowline release located at the northeast corner of Weld County Roads 7 & 16 in Frederick, Weld County, Colorado. The following report details the field methods and findings of the investigation.

We appreciate the opportunity to provide environmental services for this project. If you have any questions concerning this report, or if we can assist you in any other matter, please call.

Sincerely,

APEX CONSULTING SERVICES, INC.



Michael D. Hattel, P.G., R.E.A.
Principal

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1.0 INTRODUCTION

Apex Consulting Services, Inc. (APEX) was retained by K.P. Kauffman Company, Inc. (KPK) to perform a groundwater investigation at the Longmont Farms Unit #5 Flowline (FACILITY) release. The FACILITY is located approximately 1,100 feet north of County Road 16 and 1,200 feet east of County Road 7. The location of the flow line release is illustrated on Figure 1 which is included in Appendix A. Contaminated soil impacted by the release were excavated and disposed by KPK. This investigation was requested by the Colorado Oil and Gas Conservation Commission (COGCC) to determine if groundwater is present in the vicinity of the release.

2.0 FIELD ACTIVITIES

2.1 Utility Locates

Prior to initiating the field activities (soil borings), the State of Colorado law requires that, at least 48 hours prior to the initiation of any subsurface work (drilling, backhoe operation, etc.), a utility inspection be performed at the Property. This inspection consists of the marking of underground utility locations by authorized utility locating personnel. The utility inspection was performed prior to the probing activities.

2.2 Soil Sampling and Temporary Well Completion

On June 17, 2021, APEX contracted Drill Pro of Denver, Colorado to provide and operate probing equipment. Drill Pro, under the direction of APEX, advanced a probe boring (LF-1) with a direct-push, truck-mounted GeoProbe probe rig equipped with a four-foot-long stainless-steel system. All drilling rods and/or sampling equipment were decontaminated between samples and/or borings to prevent cross-contamination. The boring was installed to terminal depth of 17.5 (refusal) feet below ground surface (BGS). The boring was completed immediately east of the excavation. The location of the boring is illustrated on Figure 1 which is included in Appendix A.

Soil samples (cores) were continuously collected from the borings. Top soil was present in the boring from the surface to a depth of approximately one (1) foot BGS. The top soil was

underlain by silty clay. A 1-foot seam of clayey sand was present at a depth of 6 feet BGS. Weathered claystone/shale was present beneath at a depth of 16.5 feet BGS. Groundwater was not encountered in the boring. The soil samples collected from the boring were field screened for the presence of staining, unusual odors and volatile organic compounds (VOCs) vapors with a photo-ionization detector (PID) equipped with a 10.8 electro-volt lamp. Unusual odors, staining or VOCs were not present in the samples or cores collected from the boring. Soil samples were not submitted for analysis. The field boring log is included in Appendix B.

Following the completion of probing, the boring was completed as a temporary monitoring well by placing polyvinyl chloride (PVC) casing and 10 feet of factory slotted screen in the boring. The boring was filled with 10/20 silica sand to a depth of 6.5 feet BGS and then hydrated bentonite. Groundwater was not encountered during probing activities.

2.3 Groundwater Sampling

The temporary well was checked for the presence of groundwater on June 21, July 6 and July 19, 2021. Groundwater was not present in the temporary well on any of the aforementioned dates.

3.0 CONCLUSIONS AND RECOMMENDATIONS

On June 17, 2021, a probe boring was completed as a temporary monitoring well just east of the excavation at the FACILITY. Petroleum contaminated soils were not encountered in the boring. Also, the temporary monitoring well was checked for the presence of groundwater on three (3) separate occasions. Groundwater was not present in the temporary well on June 21, July 6 and Jul 19, 2021. Consequently, additional work is not warranted. Upon closure approval by COGCC, the PVC casing and screen should be removed and the boring should be backfilled with hydrated bentonite.

APPENDIX A

FIGURE



Date:	January 2021
Designed By:	K.P. Kauffman Co.
Drawn By:	MWK



K.P. Kauffman Company, Inc.
 1675 Broadway, Suite 2800
 Denver CO, 80202

K.P. Kauffman Company, Inc.
Longmont Farms Unit #5 Flowline Release
 SWSW, Section 27, Township 2 North, Range 68 West
 Weld County, Colorado

Figure #1
 Site Map

APPENDIX B

BORING LOG

ENVIRONMENTAL BORING LOG (Probe)

BORING No. LF-1

Project No: KPK

Location: Longmont Farms

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Date: 6-17-21

Weather Conditions: Sunny, hot, ~84°F, No breeze

Personnel: MJA/Dall Pro

Comments: Boring located directly east of exc. 40.105430
-104.99405

Depth (feet)	Description	Lithology	Well Construction	Water Level	Organic Vapors	Samples		
						Type/Interval	Recovery	Blows/6 inches
1	Top Soil	X						
4	Clay, brown to tan, slightly silty, med stiff (CI)	/ / / / /			< 1			
	cl			None	< 1			
	Sand, brown, med grained (60)	(e)			< 1			
8	Clay, brown turning to grey @ ~15'. Very stiff @ 15' (CI)	/ / / / /			< 1			
12		/ / / / /			< 1			
16		/ / / / /			< 1			
17.5	Shale/Claystone, grey, weathered	/ / / / /			< 1			
20		/ / / / /						

Signature of Field Personnel:

APEX CONSULTING SERVICES, INC.
 Louisville, CO (303) 665-1400