



Job No. 23011

April 26, 2023

Chris Jeub
16315 Rickenbacker Ave.
Monument, Colorado 80132

Re: OWTS - Site and Soil Evaluation
18045 Highway 83.
El Paso County, Colorado

Dear Mr. Jeub:

As requested, personnel of Ardent Engineering, Ltd have performed a reconnaissance and site evaluation at the above referenced address. The purpose of this site evaluation is to provide recommendations for an Onsite Wastewater Treatment System (OWTS). A total of two test pits were excavated in the vicinity of the proposed soil treatment area as indicated on Sheet S2 of the OWTS Design. The new treatment system is for a recreational camp consisting of semi-developed and developed units.

RECONNAISSANCE VISIT:

The reconnaissance visit was performed on April 7, 2023. The proposed soil treatment area is located approximately 175 feet to the west of the existing single-family residence. The site characteristics were observed to consist of low-lying weeds and grasses across the proposed treatment area. The topography in this area slopes down to the west at approximately 7 percent.

No significant drainage features, man-made cuts, streams, waterways, or flood zones were observed in the immediate vicinity of the treatment area. An existing treatment system for the single-family house is located approximately 30-ft to the east of the proposed treatment area.

No existing wells were observed within 100 ft of the proposed treatment area. It is required to maintain a minimum distance of 100-ft from any well location.

SOIL EVALUATION:

Two test pits were excavated at the time of our visit. The test pits (TP) were evaluated utilizing visual and tactile methods in accordance with El Paso County Health Department regulations.

No groundwater or bedrock was encountered in the test pits. No redoximorphic features, indicating fluctuations in groundwater, were observed. If groundwater and/or bedrock are

encountered at shallower depths during the excavation of the OWTS, contact Ardent Engineering, Ltd prior to installation of components. A minimum separation of 4-ft is required between the infiltrative surface and groundwater/bedrock.

The soil encountered in the test pits consisted primarily of Sandy Loam Soil Type 2. This material was not fractured nor jointed and was not cemented. The soil profiles are presented in the attached Figure 1.

RECOMMENDATIONS:

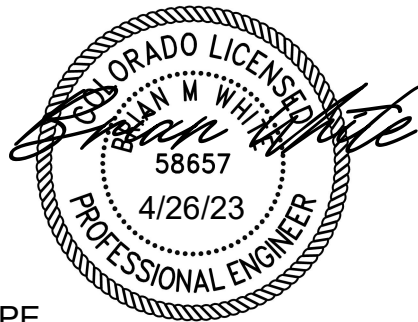
Based on our observations, a long-term acceptance rate (LTAR) of 0.6 shall be used for the design of a Treatment Level 1 OWTS. A commercial use system requires that the system be designed by a licensed engineer. Provide a minimum cover of 12-inches over all components.

LIMITATIONS:

This report is only valid in conjunction with the OWTS Design document engineered by Ardent Engineering, Ltd. The recommendations provided in this report are based upon the subsurface conditions observed in the test pits and accepted engineering practices. The subsurface conditions encountered in the excavation for the treatment area may vary from those encountered in the test pits. If subsurface conditions in the treatment area differ from those indicated in this report or restrictive conditions such as bedrock or groundwater are encountered, contact Ardent Engineering, Ltd to review prior to installation of system components.

I hope this provides the information you requested. Should you have any questions, please do not hesitate to call.

Cordially,



Brian White, PE
Project Engineer

TEST PIT NO. 1					
Date Observed 4/7/2022					
SOIL DESCRIPTION	Depth (ft)	Symbol	USDA Soil Texture	Structure Type	Grade
0-1'ft Topsoil	1				
1ft - 2ft Sandy Loam 27% Rock > 20mm Redox: None Brown	2		2	GR	(2)
2ft - 8ft Sandy Loam 27% Rock > 20mm Redox: None Tan	3				
	4				
	5				
	6		2	GR	(2)
	7				
	8				
	9				
	10				

TEST PIT NO. 2					
Date Observed 4/7/2022					
SOIL DESCRIPTION	Depth (ft)	Symbol	USDA Soil Texture	Structure Type	Grade
0-0.5-ft Topsoil	1				
0.5ft - 5ft Sandy Loam 18% Rock >20mm Redox: None Brown	2				
	3				
	4		2	GR	(2)
	5				
5ft - 8ft Sandy Loam 21% Rock > 20mm Tan	6		2	GR	(2)
	7				
	8				
	9				
	10				

Soil Structure Type

granular - gr
 platy - pl
 blocky - bk
 prismatic - pr
 single grain - sg
 massive - 0

Soil Structure Grade

(0) Structureless
 (1) Weak
 (2) Moderate
 (3) Strong



ARDENT
ENGINEERING, Ltd

4727 Shadowgeln Dr. Colorado Springs, CO 80918
 (719) 331-3528

PROFILE PIT LOG

18045 Hwy 83
 El Paso County, CO

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