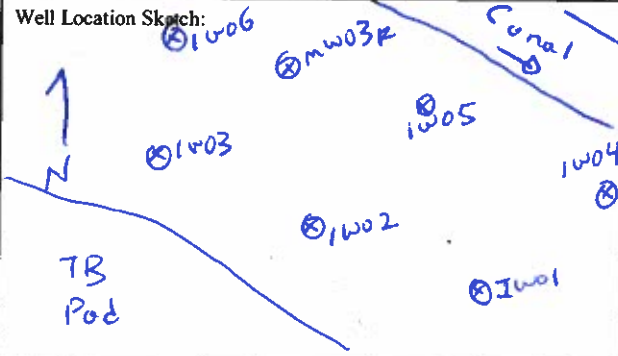


Well Location Sketch:



Compliance - Engineering - Remediation
 LT Environmental, Inc.
 4600 W. 60th Avenue

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: IW01	Project: Dubach 16-4, Thesing 9-4
Date: 11/28/18	Project Number: 14211027
Logged By: D. Steinbak	Drilled By: Site Services
Drilling Method: HSA	Sampling Method: Split Spore Continuous
Seal: Bentonite	Grout: Portland
Diameter: 2" Length: 10'	Hole Diameter: 8" Depth to Liquid: -
Diameter: 2" Length: 5'	Total Depth: 15' Depth to Water: N/A

Elevation: **N/A** Detector: **PID**

Gravel Pack: **Silica Sand**

Casing Type: **PVC**

Screen Type: **PVC** Slot: **0.01**

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand augered to 6' bgs, not logged	
					4					
					6					
					8				6-13' Not logged 13-13.5' Fgr - Cgr Sands, wet, stain/odor obs., well graded, increase in grain size w/ depth 13.5-15' clay w/ trace Fgr Sand, low-med plast., increase in sands w/ depth, plast., decrease w/ depth, mottled stain obs @ 14.5' TD @ 15' bgs Set w/ FM covers	
2	wet	179	Yes		14			SW		
3	moist	9.7	NO					CL		
3										
5		21.9								
					16					
					18					

NOTES:

Well Location Sketch:

See 1W01



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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: I W 0 2	Project: Dubach 16-4, Thesing 9-4
Date: 11/27/18	Project Number: 14211027
Logged By: D. Steinback	Drilled By: Site Services

Elevation: N/A	Detector: PID	Drilling Method: HSA	Sampling Method: Cotinuuous
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Gravel Pack: Silica Sand	Seal: Bentonite	Grout: Portland
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Casing Type: PVC	Diameter: 2"	Length: 8'	Hole Diameter: 5"	Depth to Liquid: -
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Screen Type: PVC	Slot: 0.01	Diameter: 2"	Length: 10'	Total Depth: 18'	Depth to Water: ~10'
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Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand augered to 6' bgs, not logged	
					4					
					6					
	N/A	N/A	N/A		8				No recovery 6-15' 15-16' Fgr - Myr Sands, poor grading, stain/odor obs, wet, grey/black 16-17' Fgr Clayey Sands, moist, mottled stain 17-18' Fgr Silty Sands, non cohesive, no stain/odor, moist TD @ 18' bgs Set w/ FM	
	wet	66.2	Yes		10			SP		
	moist	72.4	mottled stain		12			SC		
		30.8			14			SM		
					16	3/3				
					18					

Well Location Sketch:

See IWO1



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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: IWO3	Project: Dubach 16-4, Thesing 9-4
Date: 11/28/18	Project Number: 14211027
Logged By: D. Steinback	Drilled By: Site Services
Drilling Method: Hollow Stem Auger	Sampling Method: Split Spoon Continuous
Gravel Pack: Silica Sand	Seal: Bentonite
Casing Type: PVC	Diameter: 2"
Screen Type: PVC	Slot: 0.01
	Length: 10'
	Hole Diameter: 8"
	Depth to Liquid: -
	Total Depth: 15'
	Depth to Water: NA

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand augered to 6' bgs, not logged	
					4					
					6					
					8				NOT logged 6-13'	
					10				13-13.5' Fgr - mgyr Sands, some cgr, wet, stain/odor obs, heavy stain @ 13.5'	
					12				13.5-14' clay, low med plast, sl odor, mottled stain, trc Fgr sand, wet, cohesive	
					14	2/2		SW CL	14-15' clayey Fgr sands, brown to grey, wet, sl odor/no stain	
2	Wet	156.9	Yes		14				TD @ 15' bgs	
2		131.6	Mottled		16				Set w/ 8" Fm cover	
3		8.1	No		18					
5		24.2	1							

Well Location Sketch:

See 1W01



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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: IW04	Project: Rocky mountain Fuel 8-6 U
Date: 11/28/18	Project Number: 14217291
Logged By: D. Stainback	Drilled By: Site Services
Drilling Method: HSA	Sampling Method: Split spoon Continuous
Elevation: N/A	Detector: PID
Gravel Pack: Silica Sand	Seal: Bentonite
Casing Type: PVC	Hole Diameter: 8"
Screen Type: PVC	Depth to Liquid: -
Slot: 0.01	Total Depth: 15'
Diameter: 2"	Depth to Water: N/A
Diameter: 2"	Length: 5'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand augered to 6' bgs, not logged	
					4					
					6					
					8				6-13' not logged 13-13.75' Fgr - Cgr Sands, wet, trc gravels, well graded, staining odor observed, grey 13.75-15' clay, low-med plasticity, moist, some Fgr sands 14.5-15' w/ mottled staining TD @ 15' bgs Set w/ FM cover	
					10					
					12					
2	wet	585	Yes		14			SW		
2 3 6	moist 1	9.5 21.2	Mottled staining 1		14	2 1/2'		CL		
					16					
					18					

Well Location Sketch:

See 1001



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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: I 1005	Project: Dubach 16-4, Thesing 9-4
Date: 11/27/18	Project Number: 14211027
Logged By: D. Stoenback	Drilled By: Site Services
Elevation: N/A	Detector: PID
Drilling Method: Hollow Stem Auger	Sampling Method: Continuous
Gravel Pack: Silica Sand	Seal: Bentonite
Casing Type: PVC	Grout: *None used*
Screen Type: PVC	Slot: 1/8"
Diameter: 2"	Length: 10'
Diameter: 2"	Length: 5'
Hole Diameter: 6"	Depth to Liquid: -
Total Depth: 18'	Depth to Water: ~10'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand augered to 6' bgs, not logged	
					4					
					6					
mist			No		8			SP	6-13' very poor recovery, Fgr-Mgr Sands, wet, light brown, no stain/odor	
wet					10				13-14, silty but w/ strong stain/odor	
					12				3' clay lense, 1000-med plast., SL stain/odor	
					14				14-16' clayey Fgr-Mgr Sands, grey, SL odor	
		1377	Yes		14	2/2		SC	16-17' Light grey silt w/ Fgr Sands, non-cohesive, mist, no stain/odor	
		40	SL stain		14					
mist		11.4	Non		16				17-18' clayey Fgr-Mgr Sands, silty, no stain/odor	
					16	3/3		ML		
		0.0			18			SC	TD @ 18, Set @ 15'	
									Set w/ FM *No grout used in well construction	

Well Location Sketch:

See 1W01



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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: IW06	Project: Dubach 16-4, Thesing 9-4
Date: 11/28/18	Project Number: 14211027
Logged By: D. Starback	Drilled By: Site Services
Elevation: N/A	Detector: PID
Drilling Method: Hollow Stem Auger	Sampling Method: split spoon Continuous
Gravel Pack: Silica Sand	Seal: Bentonite
Casing Type: PVC	Grout: part 100%
Screen Type: PVC	Diameter: 2"
Slot: 0.01	Length: 10'
	Hole Diameter: 6"
	Depth to Liquid: -
	Total Depth: 12'
	Depth to Water: N/A

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand augered to 6' bgs, not logged	
					4					
					6					
					8				Not logged 6-13'	
					10					
					12				13-13.5' Fgr - Cgr Sands, well graded, wet, increase in grain size w/ depth, stain/odor abs @ 13.5'	
					14			SW	13.5-14.5' clay w/ fine Fgr sands, med plasticity, stiff, moist, nuttled stain 13.5-14'	
3.3	wet	886	No					CL	14.5-15' clayey Fgr Sands, moist, no stain/odor abs.	
5.6	moist	38.9	No					SC		
		20.7								
					16					
					18					
									TID @ 15' bgs	
									Set w/ 8" FM cover	

Well Location Sketch:

TN

MW09 MW11R MW12R

CK31

Ditch



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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW11R	Project: Rocky Mountain Fuel 8-6 U				
Date: 11-28-2018	Project Number: 14217291				
Logged By: Daniel Thomas	Drilled By: Site Services				
Drilling Method: Direct Push	Sampling Method: Continuous				
Seal: Bentonite	Grout: -				
Casing Type: PVC	Diameter: 4'	Length: 4'	Hole Diameter: 2"	Depth to Liquid: -	
Screen Type: PVC	Slot: 0.01	Diameter: 15'	Length: 15'	Total Depth: 19'	Depth to Water: ~8.5'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand augered to 6' bgs, not logged	
					4					
					6					
					8	4' 25"		SP		6'-12.5' Fg-Mg Sand trace clay, brown, Moist 6'-8.5', Saturated @ 8.5', no stain, no odor, clay lens 7'-8'
					10			CH	12.5'-18' Clay trace Fg. Sand, brown, Saturated, mod.-high plasticity, cohesive, no stain, no odor, calcification.	
					12	5' 3"		CL	18'-19' Clay trace Fg. Sand, white/brown, Saturated, Mod. plasticity, cohesion, white/no stain, no odor	
					14					
					16			CL	19'-20' Clay some Fg. Sand, brown, Saturated, low plasticity, cohesion, no stain, no odor	
					18	5' 5"				

Moist
↓
Saturated

0.3
0.3
0.5
0.3
0.5
0.2
0.3
0.2

No
↓
White Stain
no
↓

Completed at
Flesh Mountain

Well Location Sketch:

See MW11R



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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW12R	Project:
Date: 11-28-2018	Project Number:
Logged By: Daniel Thomas David Steinback	Drilled By: Site Services Drill Pro

Elevation: N/A	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
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Gravel Pack: Silica Sand	Seal: Bentonite	Grout:
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Casing Type: PVC	Diameter: 1"	Length: 4'	Hole Diameter: 2.75"	Depth to Liquid: -
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Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 15'	Total Depth: 19'	Depth to Water:
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Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
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					0					
					2				Potholed/hand augered to 6' bgs, not logged	
					4					
					6					
					8					
					10					
					12					
					14					
					16					
					18					

Not logged
Completed as
Flush Mount