



FIELD BOREHOLE LOG

Well ID: MW-318
Total Depth (ft. bgs): 182

PROJECT: SRI Phase 4

PROJECT NUMBER: 10058697

SITE LOCATION: S. of Bldg. 650

PROJECT MANAGER: T. Holmes

LOGGED BY: C. Mokri

DATE STARTED: 11/2/19

DATE COMPLETED: 11/9/19

DRILLING CONTRACTOR: Cascade

DRILLER: T. Taylor

METHOD/RIG: Gus Pech Sonic Truck

HOLE DIAMETER (IN): 8

GROUND SURFACE ELEVATION (NAVD): 304.59

DEPTH TO WATER (ft. btoc): See Table 1

BOREHOLE USE: Nested Monitoring Well

NOTES: PID measurement indicated where greater than 0. No water used during drilling.Well installed on 11/9, pad installed on 11/15 and wells developed by 11/11.

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	LAYER DEPTH	MATERIAL DESCRIPTION	Environmental Data PID (ppm)	WELL DIAGRAM
0						
—	ML		2.0	SILT, (ML)		
—	GP		4.0	POORLY GRADED GRAVEL, (GP) 2.5YR 6/2 pale red, angular, moist, loose, trace silt, with clay		
5	ML		6.0	SILT, (ML) 5YR 4/2 dark reddish gray, dry, stiff, non plastic, little fine sand, trace clay		
—	ML		7.0	SILT, (ML) 5YR 5/4 reddish brown, dry, stiff, low plasticity, little clay, trace fine sand		
—	CL		8.0	LEAN CLAY, (CL) 2.5YR 4/3 reddish brown, moist, stiff, medium plasticity, little silt		
—	CL		9.0	LEAN CLAY, (CL) 2.5YR 4/3 reddish brown, moist, very stiff, medium plasticity, little fine sand		
10	ML		11.0	SILT, (ML) 5YR 4/3 reddish brown, dry, very stiff, low plasticity, low dry strength, little fine sand		
—	CL		12.0	LEAN CLAY, (CL) 5YR 4/2 dark reddish gray, dry, stiff, low plasticity, little fine sand		
—	CL		15.0	LEAN CLAY, (CL) 7.5YR 5/3 brown, moist, medium stiff, medium plasticity, trace silt		
15	CL		21.0	LEAN CLAY, (CL) 7.5YR 5/3 brown, moist, soft, medium plasticity, trace fine sand		
20	CL		25.0	LEAN CLAY, (CL) 5YR 6/4 light reddish brown / light brown, soft, medium plasticity, trace fine gravel, little fine sand		
25	CL		29.0	LEAN CLAY, (CL) 5YR 6/4 light reddish brown / light brown, soft, mottled, medium plasticity, trace fine gravel, little fine sand		
30	CL		33.0	LEAN CLAY, (CL) 5YR 5/6 yellowish red / light brown, stiff, medium plasticity, with fine to medium sand		
35	SC		36.0	CLAYEY SAND, (SC) 10R 5/6 red, medium grained, moist, stiff, medium plasticity		
—	SP		38.0	POORLY GRADED SAND, (SP) 10R 5/6 red, fine to medium grained, moist, loose, with clay		
40	SP			POORLY GRADED SAND, (SP) 10R 5/6 red, fine to medium grained, moist, loose, trace clay		

CREATED BY: C. Mokri

CREATED DATE: 11/10/19

CHECKED BY: T. Holmes

CHECKED DATE: 2/28/20



FIELD BOREHOLE LOG

Well ID: MW-318
Total Depth (ft. bgs): 182

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	LAYER DEPTH	MATERIAL DESCRIPTION	Environmental Data PID (ppm)	WELL DIAGRAM
40						
45	SP			POORLY GRADED SAND, (SP) 10R 5/6 red, fine to medium grained, moist, loose, trace clay (<i>continued</i>)		
50			50.0			
	GW		52.0	WELL GRADED GRAVEL, (GW) 5YR 7/3 pink, moist, very loose, with fine to medium sand, trace clay		
55	SP			POORLY GRADED SAND, (SP) 10YR 7/4 very pale brown / grayish orange, fine to medium grained, moist, very loose, with gravel		
			56.0			
60	SP			POORLY GRADED SAND, (SP) 2.5YR 5/8 red, fine to medium grained, moist, very loose, little gravel		
			62.0			
65	SP			POORLY GRADED SAND, (SP) 10YR 7/4 very pale brown / grayish orange, fine to medium grained, moist, very loose, trace fine gravel		
			68.0			
	SP		69.0	POORLY GRADED SAND, (SP) 5YR 5/8 yellowish red, fine to medium grained, moist, very loose, little clay		
70	SP			POORLY GRADED SAND WITH GRAVEL, (SP) 10YR 7/4 very pale brown / grayish orange, very loose		
			73.0			
75	SP			POORLY GRADED SAND, (SP) 7.5YR 6/4 light brown, medium grained, moist, very loose, with fine gravel		
			77.0			
	SP			POORLY GRADED SAND, (SP) 7.5YR 7/4 pink, fine to medium grained, moist, very loose		
			79.0			
80	SW			WELL GRADED SAND WITH GRAVEL, (SW) 7.5YR 6/6 reddish yellow, moist, very loose		
			83.0			
85	SP			POORLY GRADED SAND, (SP) 7.5YR 8/3 pink, fine grained, moist, very loose, trace clay		

- Cement-Bentonite
Grout

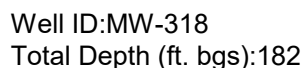


FIELD BOREHOLE LOG

Well ID: MW-318
Total Depth (ft. bgs): 182

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	LAYER DEPTH	MATERIAL DESCRIPTION	Environmental Data PID (ppm)	WELL DIAGRAM
	SP		87.0	POORLY GRADED SAND, (SP) 7.5YR 8/3 pink, fine grained, moist, very loose, trace clay (continued)		
	SP		87.8			
	CL		88.6	POORLY GRADED SAND, (SP) 7.5YR 8/1 white, fine grained, moist, very loose, trace clay		
	SP		89.0	LEAN CLAY, (CL) 7.5YR 8/3 pink, moist, soft, medium plasticity		
90	CL		90.0	POORLY GRADED SAND, (SP) 7.5YR 8/1 white, fine grained, moist, very loose		
	SP		91.0	LEAN CLAY, (CL) 7.5YR 8/3 pink, moist, soft, medium plasticity		
	CL		92.0	POORLY GRADED SAND, (SP) 7.5YR 8/1 white, fine grained, moist, very loose		
				LEAN CLAY, (CL) 7.5YR 8/3 pink, moist, soft, medium plasticity		
				POORLY GRADED SAND, (SP) 2.5Y 7/3 pale yellow, fine to medium grained, wet, very loose		
95						
	SP					
100						
			102.0			
	CH		103.0	FAT CLAY, (CH) 7.5YR 5/8 strong brown, soft, mottled, high plasticity		
	SW		103.5	WELL GRADED SAND, (SW) 7.5YR 7/6 reddish yellow, wet, very loose, little clay		
	CH		104.8	FAT CLAY, (CH) gray and red, soft, mottled, high plasticity		
105						
	SP			POORLY GRADED SAND, (SP) 7.5YR 7/6 reddish yellow, fine to medium grained, wet, very loose		
			107.0			
	SP			POORLY GRADED SAND, (SP) 10YR 7/4 very pale brown / grayish orange, fine to medium grained, wet, very loose, little gravel		
			109.0			
110	SW			WELL GRADED SAND, (SW) 10YR 7/8 yellow, wet, very loose, trace fine gravel		
			111.0			
	SW			WELL GRADED SAND, (SW) 7.5YR 6/8 reddish yellow, wet, very loose, little gravel		
			113.0			
	SW			WELL GRADED SAND WITH GRAVEL, (SW) 7.5YR 7/8 reddish yellow, loose, little clay, with cobbles, moderate cementation, Ironstone		
115						
	SW		116.0			
	SW		117.0	WELL GRADED SAND WITH GRAVEL, (SW) 7.5YR 3/4 dark brown, loose, little clay, with cobbles, none cementation, Ironstone		
	SW		118.0			
	GW		119.0	WELL GRADED SAND WITH GRAVEL, (SW) 7.5YR 5/6 strong brown, loose, little clay, with cobbles, none cementation, Ironstone		
120						
	SW			WELL GRADED GRAVEL, (GW) 7.5YR 3/4 dark brown, loose, with cobbles, Ironstone		
				WELL GRADED SAND, (SW) 7.5YR 6/6 reddish yellow, wet, loose, with medium to coarse gravel, with clay		
			122.0			
	SW			WELL GRADED SAND WITH GRAVEL, (SW) 7.5YR 6/6 reddish yellow, wet, very loose, trace clay		
125						
			125.0			
	SP			POORLY GRADED SAND, (SP) 5Y 5/3 olive, fine to medium grained, wet, very loose, little clay, little gravel		
130						
	SP		130.0			
			131.0	POORLY GRADED SAND, (SP) 5Y 4/2 olive gray, fine to medium grained, wet, very loose, trace cobbles, trace clay, trace fine gravel		


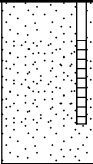
- Bentonite
Chips- Prepacked
Well Screen- Bentonite
Chips

Page: 4 of 5



FIELD BOREHOLE LOG

Well ID:MW-318
Total Depth (ft. bgs):182

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	LAYER DEPTH	MATERIAL DESCRIPTION	Environmental Data PID (ppm)	WELL DIAGRAM
180	SP		182.0	POORLY GRADED SAND, (SP) 10YR 7/1 light gray, fine grained, very loose, no gravel (continued)		 - Prepacked Well Screen

Bottom of borehole at 182.0 feet.