

Date Started: 02/20/2020	Surface Elevation: 486.81 ft amsl	Well ID: MW-93-50, MW-93-213
Date Completed: 02/29/2020	Shallow Well Elevation: 486.41 ft amsl	
Drilling Co.: Cascade	Deep Well Elevation: 486.33 ft amsl	Client: PG&E
Drilling Method: Sonic Drilling	Northing (NAD83): 2104450.54	Project: Final GW Remedy Phase 1
Driller Name: Eddie Ramos	Easting (NAD83): 7614733.00	Location: PG&E Topock, Needles, California
Drilling Asst: J. Candelaria / F. Sandoval	Borehole Diameter: 6-12 inches	
Logger: S. McGrane / G. Jeffers	Static Water Level: See Log for Depths	Project Number: RC000753.0051
Editor: Grant Wilford	Development End Date: 6/4/2020	
Total Depth: 217 ft bgs	Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault	

Depth (ft)	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Well Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume	
1		Topock - Alluvium Deposits	SM		(+0.1 - 2.0') Surface completion		(+0.1 - 2.0') 12 bags Note: 2.5 x 2.5 ft concrete pad with 18" diameter lockable vault, King Kon-Crete 4000 PSI	
2					(0.4 - 30.0') 2" PVC Sch 80 Casing			
3		Topock - Alluvium Deposits	SW		(2.0 - 5.2') Portland Cement 5% Bentonite Type I, II and V with Hydrogel	(2.0 - 5.2') 17.7 gallons	(2.0 - 5.2') 20 gallons (113%) Note: Grout seal, topped off on 2/23/20	
4					(0.0 - 8.0') 12.0" Borehole			
5		Topock - Alluvium Deposits	NR					
6		Topock - Alluvium Deposits	SW					
7		Topock - Alluvium Deposits	GW					
8		Topock - Alluvium Deposits	SM		(10.5 - 11.5') Centralizer			
9		Topock - Alluvium Deposits	GW-GM		(5.2 - 22.5') Portland Cement 5% Bentonite Type I, II and V with Hydrogel	(5.2 - 22.5') 69.9 gallons	(5.2 - 22.5') 130 gallons (186%) Note: Grout seal, used >20% calculated volume due to voids and grout migration into the formation.	
10		Topock - Alluvium Deposits	SW-SM		(8.0 - 217.0') 10.0" Borehole			
11								
12								
13								
14		Topock - Alluvium Deposits	SW					

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WELL CONSTRUCTION DETAILS_PG&E_TOPOCK C:\USERS\MCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\11_23_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 11/23/20 21:32

Date Started: 02/20/2020	Surface Elevation: 486.81 ft amsl	Well ID: MW-93-50, MW-93-213
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Drilling Co.: Cascade	Deep Well Elevation: 486.33 ft amsl	Client: PG&E
Drilling Method: Sonic Drilling	Northing (NAD83): 2104450.54	Project: Final GW Remedy Phase 1
Driller Name: Eddie Ramos	Easting (NAD83): 7614733.00	Location: PG&E Topock, Needles, California
Drilling Asst: J. Candelaria / F. Sandoval	Borehole Diameter: 6-12 inches	
Logger: S. McGrane / G. Jeffers	Static Water Level: See Log for Depths	Project Number: RC000753.0051
Editor: Grant Wilford	Development End Date: 6/4/2020	
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Depth (ft)	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Well Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
21		Topock - Alluvium Deposits	SW-SM		(0.5 - 193.0') 2" PVC Sch 80 (5 Castings) Portland Cement 5% Bentonite Type I, II and V with Hydrogel	(5.2 - 22.5') 69.9 gallons	(5.2 - 22.5') 130 gallons (186%) Note: Grout seal, used >20% calculated volume due to voids and grout migration into the formation.
22							
23		Topock - Alluvium Deposits	SW				
24							
25					(22.5 - 28.0') Cemex #60 (40x70) Lapis Lustre Sand	(22.5 - 28.0') 5.5 bags	(22.5 - 28.0') 12 bags (218%) Note: Transition sand, used >20% of the calculated volume due to potential voids forming during drilling.
26							
27			NR				
28		Topock - Alluvium Deposits	SW				
29							
30		Topock - Alluvium Deposits	SW-SM			(8.0 - 217.0') 10.0" Borehole	
31						(30.0 - 50.0') 2" 0.020-Slot Sch 80 PVC Screen	
32		Topock - Alluvium Deposits	SM				
33							
34	MW-93-VAS-32-37 (2.5 ppb) 2/6/2020 10:00	Topock - Alluvium Deposits	SC		(28.0 - 55.0') Cemex #3 MESH (8x20) Lapis Lustre Sand	(28.0 - 55.0') 25.3 bags	(28.0 - 55.0') 43 bags (170%) Note: Lapis Lustre Sand, used >20% of the calculated volume due to potential voids forming during drilling
35							
36		Topock - Alluvium Deposits	SW-SM				
37							
38		Topock - Alluvium Deposits	ML				
39							

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WELL CONSTRUCTION DETAILS_PG&E_TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\112320\TOPOCK DATABASE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 11/23/20 21:32

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Drilling Co.: Cascade	Deep Well Elevation: 486.33 ft amsl	Client: PG&E
Drilling Method: Sonic Drilling	Northing (NAD83): 2104450.54	Project: Final GW Remedy Phase 1
Driller Name: Eddie Ramos	Easting (NAD83): 7614733.00	Location: PG&E Topock, Needles, California
Drilling Asst: J. Candelaria / F. Sandoval	Borehole Diameter: 6-12 inches	
Logger: S. McGrane / G. Jeffers	Static Water Level: See Log for Depths	Project Number: RC000753.0051
Editor: Grant Wilford	Development End Date: 6/4/2020	
Total Depth: 217 ft bgs	Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault	

Depth (ft)	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Well Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
41		Topock - Alluvium Deposits	ML		(0.5 - 193.0') 2" PVC Sch 80 Casing		
42		Topock - Alluvium Deposits	SM				
43		Topock - Alluvium Deposits	ML				
44	MW-93-VAS-42-46.3 (8.5 ppb) 2/6/2020 13:18	Topock - Alluvium Deposits	SC				
45							
46							
47			NR				
48		Topock - Alluvium Deposits	GW		(28.0 - 55.0') Cemex #3 MESH (8x20) Lapis Lustre Sand	(28.0 - 55.0') 25.3 bags	(28.0 - 55.0') 43 bags (170%) Note: Lapis Lustre Sand, used >20% of the calculated volume due to potential voids forming during drilling
49							
50					(8.0 - 217.0') 10.0" Borehole		
51		Topock - Alluvium Deposits	ML		(50.5 - 51.5') Centralizer		
52		Topock - Alluvium Deposits	SW				
53		Topock - Alluvium Deposits	SM				
54							
55		Topock - Alluvium Deposits	ML				
56		Topock - Alluvium Deposits	SM				
57							
58	MW-93-VAS-57-61.1 (<0.033 U ppb) 2/6/2020 16:03	Topock - Alluvium Deposits	SM		(55.0 - 64.0') Bentonite seal chips Puregold medium chips	(55.0 - 64.0') 6.5 bags	(55.0 - 64.0') 7 bags (108%) Note: Intermediate seal
59		Topock - Alluvium Deposits	SM				

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Drilling Method: Sonic Drilling	Northing (NAD83): 2104450.54	Project: Final GW Remedy Phase 1
Driller Name: Eddie Ramos	Easting (NAD83): 7614733.00	Location: PG&E Topock, Needles, California
Drilling Asst: J. Candelaria / F. Sandoval	Borehole Diameter: 6-12 inches	
Logger: S. McGrane / G. Jeffers	Static Water Level: See Log for Depths	Project Number: RC000753.0051
Editor: Grant Wilford	Development End Date: 6/4/2020	
Total Depth: 217 ft bgs	Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault	

Depth (ft)	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Well Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
61		Topock - Alluvium Deposits	SM		(0.5 - 193.0') 2" PVC Sch 80 Casing		
62					(55.0 - 64.0') Bentonite seal chips Puregold medium chips	(55.0 - 64.0') 6.5 bags	(55.0 - 64.0') 7 bags (108%) Note: Intermediate seal
63		Topock - Alluvium Deposits	SM				
64		Topock - Alluvium Deposits	SM				
65		Topock - Alluvium Deposits	SM				
66		Topock - Alluvium Deposits	SM				
67		Topock - Alluvium Deposits	SW-SM				
68		Topock - Alluvium Deposits	SW-SM				
69		Topock - Alluvium Deposits	SW-SM				
70		Topock - Alluvium Deposits	SW-SM		(8.0 - 217.0') 10.0" Borehole		
71		Topock - Alluvium Deposits	ML				
72		Topock - Alluvium Deposits	ML		(64.0 - 185.0') Bentonite seal pellets Pel-Plug (TR30) 3/8"	(64.0 - 185.0') 101.3 buckets	(64.0 - 185.0') 123 buckets (121%) Note: Intermediate seal, used >20% of the calculated volume due to potential voids forming during drilling
73		Topock - Alluvium Deposits	SW-SM				
74	MW-93-VAS-72-77 (<0.033 U ppb) 2/7/2020 11:23	Topock - Alluvium Deposits	SW-SM				
75		Topock - Alluvium Deposits	SW-SM				
76		Topock - Alluvium Deposits	SW-SM				
77		Topock - Alluvium Deposits	SW-SM				
78		Topock - Alluvium Deposits	GM				
79		Topock - Alluvium Deposits	GW-GM				

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Drilling Method: Sonic Drilling	Northing (NAD83): 2104450.54	Project: Final GW Remedy Phase 1
Driller Name: Eddie Ramos	Easting (NAD83): 7614733.00	Location: PG&E Topock, Needles, California
Drilling Asst: J. Candelaria / F. Sandoval	Borehole Diameter: 6-12 inches	
Logger: S. McGrane / G. Jeffers	Static Water Level: See Log for Depths	Project Number: RC000753.0051
Editor: Grant Wilford	Development End Date: 6/4/2020	
Total Depth: 217 ft bgs	Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault	

Depth (ft)	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Well Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume				
81		Topock - Alluvium Deposits	SM	[Pattern]	(0.5 - 193.0') 2" PVC Sch 80 Casing						
82											
83											
84											
85		Topock - Alluvium Deposits	ML	[Pattern]							
86		Topock - Alluvium Deposits	SM	[Pattern]							
87		Topock - Alluvium Deposits	SM	[Pattern]							
88		Topock - Alluvium Deposits	SM	[Pattern]							
89											
90								(64.0 - 185.0') Bentonite seal pellets Pel-Plug (TR30) 3/8"	(8.0 - 217.0') 10.0" Borehole	(64.0 - 185.0') 101.3 buckets	(64.0 - 185.0') 123 buckets (121%) Note: Intermediate seal, used >20% of the calculated volume due to potential voids forming during drilling
91											
92											
93											
94											
95								(94.5 - 95.5') Centralizer			
96											
97											
98											
99		Topock - Alluvium Deposits	SW	[Pattern]							

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Depth (ft)	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Well Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume	
101		Topock - Alluvium Deposits	SW-SM		(0.5 - 193.0') 2" PVC Sch 80 Casing			
102		Topock - Alluvium Deposits	SW					
103		Topock - Alluvium Deposits	SW					
104		Topock - Alluvium Deposits	SW-SM					
105		Topock - Alluvium Deposits	SW-SM					
106		Topock - Alluvium Deposits	SW-SM					
107		Topock - Alluvium Deposits	SW-SM					
108		Topock - Alluvium Deposits	SW-SM					
109		Topock - Alluvium Deposits	SW-SM					
110		Topock - Alluvium Deposits	SW-SM		(64.0 - 185.0') Bentonite seal pellets Pel-Plug (TR30) 3/8"	(8.0 - 217.0') 10.0" Borehole	(64.0 - 185.0') 101.3 buckets	(64.0 - 185.0') 123 buckets (121%) Note: Intermediate seal, used >20% of the calculated volume due to potential voids forming during drilling
111		Topock - Alluvium Deposits	SM					
112		Topock - Alluvium Deposits	SM					
113		Topock - Alluvium Deposits	SM					
114	MW-93-VAS-112-117 (<0.033 U ppb) 2/8/2020 09:08	Topock - Alluvium Deposits	SW					
115		Topock - Alluvium Deposits	SW					
116		Topock - Alluvium Deposits	SW					
117		Topock - Alluvium Deposits	SW					
118		Topock - Alluvium Deposits	SM					
119		Topock - Alluvium Deposits	SM					
			SW-SM					

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121		Topock - Alluvium Deposits	SW-SM	[Pattern]	(0.5 - 193.0') 2" PVC Sch 80 Casing		
122							
123		Topock - Alluvium Deposits	SM	[Pattern]			
124							
125		Topock - Alluvium Deposits	SW	[Pattern]	(64.0 - 185.0') Bentonite seal pellets Pel-Plug (TR30) 3/8"		
126							
127		Topock - Alluvium Deposits	SW-SM	[Pattern]			
128							
129		Topock - Alluvium Deposits	SW	[Pattern]			
130							
131		Topock - Alluvium Deposits	SW-SM	[Pattern]	(134.5 - 135.5') Centralizer		
132							
133		Topock - Alluvium Deposits	SW	[Pattern]			
134							
135		Topock - Alluvium Deposits	SW-SM	[Pattern]			
136							
137		Topock - Alluvium Deposits	SW	[Pattern]			
138							
139		Topock - Alluvium Deposits	SW-SM	[Pattern]			

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141		Topock - Alluvium Deposits	SW-SM		(0.5 - 193.0') 2" PVC Sch 80 Casing		
142							
143		Topock - Alluvium Deposits	SW				
144	MW-93-VAS-142-147 (<0.17 U ppb) 2/8/2020 15:23						
145							
146		Topock - Alluvium Deposits	SM				
147							
148		Topock - Alluvium Deposits	SW				
149							
150							
151		Topock - Alluvium Deposits	SW-SM				
152							
153		Topock - Alluvium Deposits	SM				
154	MW-93-VAS-152-157 (<0.17 U ppb) 2/9/2020 11:42						
155							
156		Topock - Alluvium Deposits	SM				
157							
158		Topock - Alluvium Deposits	SM				
159							

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162		Topock - Alluvium Deposits	GM					
163		Topock - Alluvium Deposits	SM					
164		Topock - Alluvium Deposits	SM					
165		Topock - Alluvium Deposits	SM					
166		Topock - Alluvium Deposits	SM					
167		Topock - Alluvium Deposits	SM					
168		Topock - Alluvium Deposits	SM					
169		Topock - Alluvium Deposits	SM					
170		Topock - Alluvium Deposits	SW-SM		(64.0 - 185.0') Bentonite seal pellets Pel-Plug (TR30) 3/8"	(8.0 - 217.0') 10.0" Borehole	(64.0 - 185.0') 101.3 buckets	(64.0 - 185.0') 123 buckets (121%) Note: Intermediate seal, used >20% of the calculated volume due to potential voids forming during drilling
171		Topock - Alluvium Deposits	SW-SM					
172		Topock - Alluvium Deposits	NR					
173		Topock - Alluvium Deposits	NR					
174	MW-93-VAS-172-177 (<0.17 U ppb) 2/10/2020 09:28	Topock - Alluvium Deposits	SW-SM		(174.5 - 175.5') Centralizer			
175		Topock - Alluvium Deposits	SW-SM					
176		Topock - Alluvium Deposits	SW-SM					
177		Topock - Alluvium Deposits	ML					
178		Topock - Alluvium Deposits	ML					
179		Topock - Alluvium Deposits	SM					

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: solid blue and hollow blue water table marks represent depth to water (ft. bgs.) measured post development for the shallow well and deep well respectively; installed in MW-93

WELL CONSTRUCTION DETAILS_PG&E_TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\112320\TOPOCK DATABASE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 11/23/20 21:32

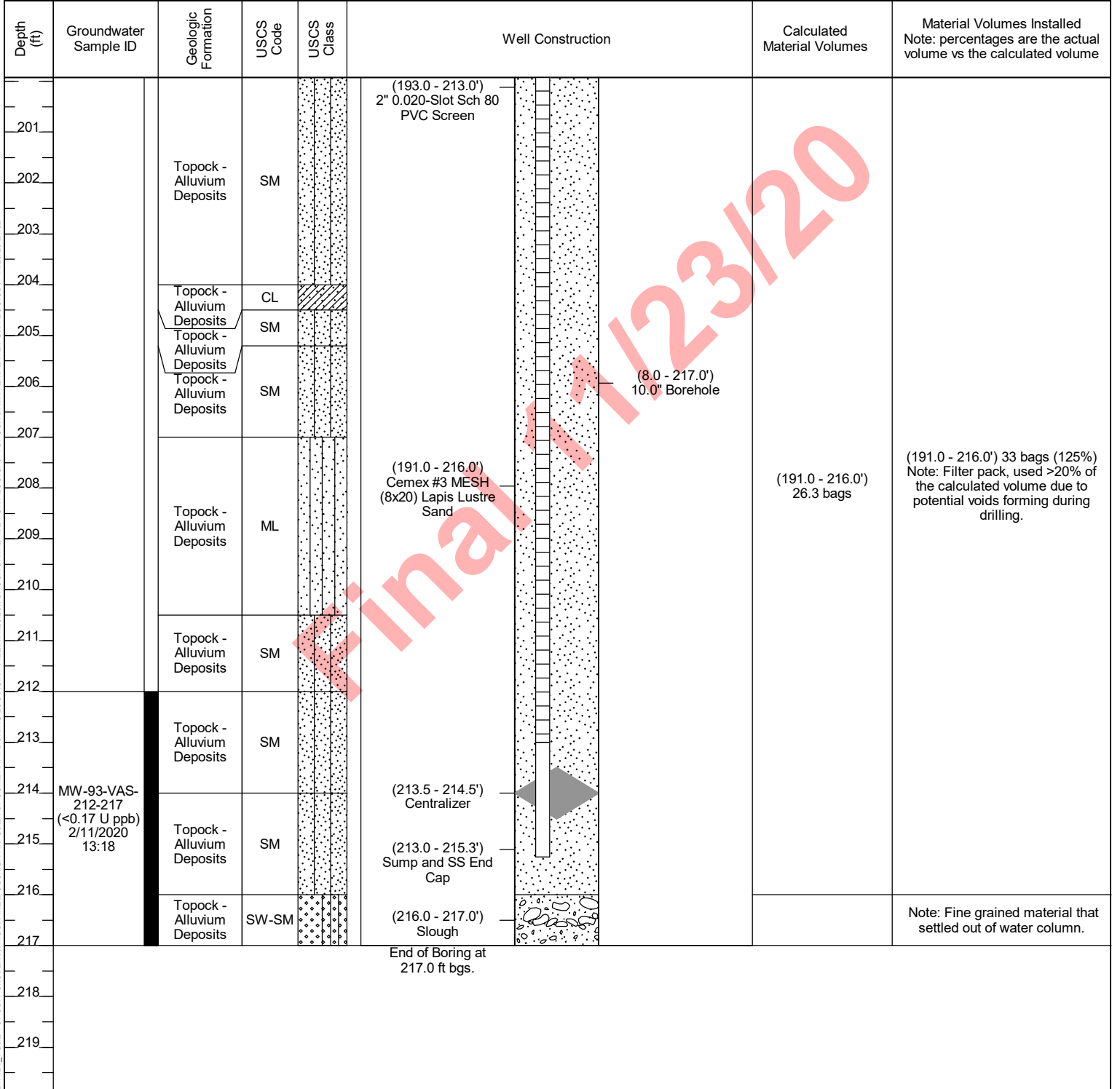
Date Started: 02/20/2020	Surface Elevation: 486.81 ft amsl	Well ID: MW-93-50, MW-93-213
Date Completed: 02/29/2020	Shallow Well Elevation: 486.41 ft amsl	
Drilling Co.: Cascade	Deep Well Elevation: 486.33 ft amsl	Client: PG&E
Drilling Method: Sonic Drilling	Northing (NAD83): 2104450.54	Project: Final GW Remedy Phase 1
Driller Name: Eddie Ramos	Easting (NAD83): 7614733.00	Location: PG&E Topock, Needles, California
Drilling Asst: J. Candelaria / F. Sandoval	Borehole Diameter: 6-12 inches	
Logger: S. McGrane / G. Jeffers	Static Water Level: See Log for Depths	Project Number: RC000753.0051
Editor: Grant Wilford	Development End Date: 6/4/2020	
Total Depth: 217 ft bgs	Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault	

Depth (ft)	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Well Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
181		Topock - Alluvium Deposits	SM		(0.5 - 193.0') 2" PVC Sch 80 Casing		
182		Topock - Alluvium Deposits	ML		(64.0 - 185.0') Bentonite seal pellets Pel-Plug (TR30) 3/8"	(64.0 - 185.0') 101.3 buckets	(64.0 - 185.0') 123 buckets (121%) Note: Intermediate seal, used >20% of the calculated volume due to potential voids forming during drilling
183							
184							
185		Topock - Alluvium Deposits	SM				
186							
187							
188		Topock - Alluvium Deposits	SW-SM		(185.0 - 191.0') Cemex #60 (40x70) Lapis Lustre Sand	(185.0 - 191.0') 6.3 bags	(185.0 - 191.0') 8.5 bags (135%) Note: Transition sand, used >20% of the calculated volume due to potential voids forming during drilling.
189		Topock - Alluvium Deposits	ML				
190		Topock - Alluvium Deposits	SM				
191					(8.0 - 217.0') 10.0" Borehole		
192		Topock - Alluvium Deposits	SM				
193							
194	MW-93-VAS-192-197 (<0.033 U ppb) 2/10/2020 14:53				(193.0 - 213.0') 2" 0.020-Slot Sch 80 PVC Screen		
195			SM		(191.0 - 216.0') Cemex #3 MESH (8x20) Lapis Lustre Sand	(191.0 - 216.0') 26.3 bags	(191.0 - 216.0') 33 bags (125%) Note: Filter pack, used >20% of the calculated volume due to potential voids forming during drilling.
196							
197							
198		Topock - Alluvium Deposits	SM				
199							

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: solid blue and hollow blue water table marks represent depth to water (ft. bgs.) measured post development for the shallow well and deep well respectively; installed in MW-93

WELL CONSTRUCTION DETAILS_PG&E_TOPOCK C:\USERS\MCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\112320\TOPOCK DATA TEMPLATE FOR PLOG.GDT 11/23/20 21:32

Date Started: 02/20/2020	Surface Elevation: 486.81 ft amsl	Well ID: MW-93-50, MW-93-213
Date Completed: 02/29/2020	Shallow Well Elevation: 486.41 ft amsl	
Drilling Co.: Cascade	Deep Well Elevation: 486.33 ft amsl	Client: PG&E
Drilling Method: Sonic Drilling	Northing (NAD83): 2104450.54	Project: Final GW Remedy Phase 1
Driller Name: Eddie Ramos	Easting (NAD83): 7614733.00	Location: PG&E Topock, Needles, California
Drilling Asst: J. Candelaria / F. Sandoval	Borehole Diameter: 6-12 inches	
Logger: S. McGrane / G. Jeffers	Static Water Level: See Log for Depths	Project Number: RC000753.0051
Editor: Grant Wilford	Development End Date: 6/4/2020	
Total Depth: 217 ft bgs	Well Completion: <input checked="" type="checkbox"/> Flush <input type="checkbox"/> Stick-up <input type="checkbox"/> To Be Completed in Well Vault	



Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: solid blue and hollow blue water table marks represent depth to water (ft. bgs.) measured post development for the shallow well and deep well respectively; installed in MW-93

WELL CONSTRUCTION DETAILS_PG&E_TOPOCK C:\USERS\MCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\112320\TOPOCK DATABASE FOR PLOG.GPJ_TOPOCK DATA TEMPLATE FOR PLOG.GDT 11/23/20 21:32

Date Started:	02/04/2020	Surface Elevation:	486.81 ft amsl	Boring No.: MW-93	
Date Completed:	02/18/2020	Northing (NAD83):	2104450.54		
Drilling Co.:	Cascade	Easting (NAD83):	7614733.00	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	217 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart Longyear Track Mount	Borehole Diameter:	6-12 inches	Location:	PG&E Topock, Needles, California
Driller Name:	Eddie Ramos	Depth to First Water:	31.8 ft bgs	Project Number:	RC000753.0051
Drilling Asst:	J. Candelaria / F. Sandoval	Sampling Method:	4 inch x 10 ft Core Barrel		
Logger:	S. McGrane / G. Jeffers	Sampling Interval:	Continuous		
Editor:	Grant Willford	Converted to Well:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description	Drilling Notes	Drilling Fluid
1	60			Topock - Alluvium Deposits	SM		(0.0 - 5.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (7.5YR 4/4); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subangular; little small to large cobbles, angular to subangular; little silt; trace boulders, subangular; coarser clasts composed of metadiorite; dry; logged from hand auger cuttings	(0.0 - 5.0') Hand augered for utility clearance.	(0.0 - 215.0') No water used
2									
3									
4									
5									
6	48	No Sieve Samples Collected		Topock - Alluvium Deposits	SW		(5.0 - 5.5') Topock - Alluvium Deposits; Well graded sand with gravel (SW); brown (7.5YR 4/4); very fine grained to medium grained, angular to subround; some coarse to very coarse grained sand, angular to subround; little granules to very large pebbles, angular to subangular; trace small cobbles, subangular; trace silt; trace clay; coarser clasts composed of metadiorite; dry to moist	(5.0 - 12.0') Core fell out of core barrel during bagging lost from 5.5 to 8.5 ft bgs.	
7				NR		(5.5 - 8.5') No recovery (NR); see drilling notes			
8									
9				Topock - Alluvium Deposits	SW		(8.5 - 9.5') Topock - Alluvium Deposits; Well graded sand with gravel (SW); dark grayish brown / dark yellowish brown (10YR 4/2); very fine grained to medium grained, angular to subround; some coarse to very coarse grained sand, angular to subround; little granules to very large pebbles, angular to subangular; trace small cobbles, subangular; trace silt; coarser clasts composed of metadiorite; dry to moist		
10				Topock - Alluvium Deposits	GW		(9.5 - 11.0') Topock - Alluvium Deposits; Well graded gravel with sand (GW); dark grayish brown / dark yellowish brown (10YR 4/2); granules to medium pebbles, angular to subround; some very fine to very coarse grained sand, angular to subround; trace large to very large pebbles, angular to subangular; trace silt; coarser clasts composed of metadiorite; dry to moist		
11				Topock - Alluvium Deposits	SM		(11.0 - 12.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (10YR 4/3); very fine grained to very coarse grained, angular to subround; little granules to large pebbles, angular to subround; little silt; trace small cobbles, subangular; trace clay; coarser clasts composed of metadiorite; dry to moist		
12	60			Topock - Alluvium Deposits	GW-GM		(12.0 - 13.3') Topock - Alluvium Deposits; Well graded gravel with silt and sand (GW-GM); dark yellowish brown (10YR 4/4); granules to very large pebbles, angular to subround; and very fine to very coarse grained sand, angular to subround; little silt; trace small cobbles, angular; coarser clasts composed of metadiorite; dry to moist	(12.0 - 17.0') Normal drilling	
13				Topock - Alluvium Deposits	SW-SM		(13.3 - 19.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); dark grayish brown / dark yellowish brown (10YR 4/2); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; little silt; trace small cobbles, subangular; coarser clasts composed of metadiorite; dry to moist		
14				Topock - Alluvium Deposits	SW-SM		(15.8') brown (10YR 4/3); increase in granules and pebbles, decrease in sand		
15				Topock - Alluvium Deposits	SW-SM		(18') little small cobbles, angular to subangular		
16				Topock - Alluvium Deposits	SW		(17.0 - 20.0') Topock - Alluvium Deposits; Well graded sand with gravel (SW); brown (10YR 4/3); very fine grained to very coarse grained, angular to round; some granules to very large pebbles,	(17.0 - 22.0') Clean out run not conducted after advancing 10-inch casing, core barrel filled at 22 ft bgs. top foot slough.	
17									
18									
19									
20									

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SOIL BORING LOG: PG&E-TOPOCK-C:\USERS\MCGRANE\DOCUMENTS\PG&E-TOPOCK\DRIFT BORING LOGS\GINT FILES\11_30_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/02/20 21:10

Date Started:	02/04/2020	Surface Elevation:	486.81 ft amsl	Boring No.: MW-93	
Date Completed:	02/18/2020	Northing (NAD83):	2104450.54		
Drilling Co.:	Cascade	Easting (NAD83):	7614733.00	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	217 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart Longyear Track Mount	Borehole Diameter:	6-12 inches	Location:	PG&E Topock, Needles, California
Driller Name:	Eddie Ramos	Depth to First Water:	31.8 ft bgs	Project Number:	RC000753.0051
Drilling Asst:	J. Candelaria / F. Sandoval	Sampling Method:	4 inch x 10 ft Core Barrel		
Logger:	S. McGrane / G. Jeffers	Sampling Interval:	Continuous		
Editor:	Grant Willford	Converted to Well:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description	Drilling Notes	Drilling Fluid
21	156 72			Topock - Alluvium Deposits	SW-SM		angular to subangular; trace small cobbles, subangular; trace silt; trace clay; coarser clasts composed of metadiorite; dry to moist (20.0 - 22.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (10YR 4/3); very fine grained to very coarse grained, angular to round; some granules to very large pebbles; little silt; trace small cobbles, subangular; coarser clasts composed of metadiorite; moist		
22	72								
23				Topock - Alluvium Deposits	SW		(22.0 - 26.0') Topock - Alluvium Deposits; Well graded sand with gravel (SW); brown (10YR 4/3); very fine grained to very coarse grained, angular to round; some granules to very large pebbles, angular to subangular; trace silt; coarser clasts composed of metadiorite; moist to wet (24') grayish brown (10YR 5/2); trace small cobbles, subangular to subround	(22.0 - 27.0') Soft drilling, lost bottom 3 ft. downhole, recovered 2 ft. disturbed.	
24	48								
25									
26									
27					NR		(26.0 - 27.0') No recovery (NR); see drilling notes		
28				Topock - Alluvium Deposits	SW		(27.0 - 29.0') Topock - Alluvium Deposits; Well graded sand with gravel (SW); grayish brown (10YR 5/2); very fine grained to very coarse grained, angular to round; little granules to very large pebbles, angular to subround; trace silt; trace clay; coarser clasts composed of metadiorite; dry (28.5'); trace small to large cobbles, subround	(27.0 - 32.0') Normal drilling	
29									
30		No Sieve Samples Collected		Topock - Alluvium Deposits	SW-SM		(29.0 - 31.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (10YR 4/3); very fine grained to very coarse grained, angular to round; some granules to very large pebbles, angular to subangular; little silt; trace small to large cobbles, angular; trace clay; coarser clast composed of conglomerate; moist		
31									
32	120			Topock - Alluvium Deposits	SM		(31.0 - 33.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); grayish brown (10YR 5/2); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subangular; some silt; little clay; trace small to large cobbles, subangular; coarser clasts composed of metadiorite; moist	(32.0 - 37.0') Soft drilling	
33									
34			MW-93-VAS-32-37 (2.5 ppb) 2/6/2020 10:00	Topock - Alluvium Deposits	SC		(33.0 - 35.0') Topock - Alluvium Deposits; Clayey sand with gravel (SC); dark grayish brown / dark yellowish brown (10YR 4/2); very fine grained to very coarse grained, angular to subround; little clay; trace small cobbles, subangular; trace silt; coarser clasts composed of metadiorite; moist		
35									
36				Topock - Alluvium Deposits	SW-SM		(35.0 - 37.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (7.5YR 4/4); very fine grained to very coarse grained, angular to subangular; little granules to very large pebbles, angular to subround; little silt; trace large cobbles, subangular; trace clay; coarser clasts composed of metadiorite; wet	(35.0') Approximate depth to water.	
37									
38				Topock - Alluvium Deposits	ML		(37.0 - 40.8') Topock - Alluvium Deposits; Sandy silt with gravel (ML); grayish brown (10YR 5/2); low plasticity; and very fine to very coarse grained sand, angular to subangular; little granules to very large pebbles, angular to subangular; moist; soft	(37.0 - 44.0') Normal drilling	
39	114								
40									

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SOIL BORING LOG: PG&E TOPOCK C:\USERS\MCGRANE\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\11_30_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/02/20 21:10

Date Started:	02/04/2020	Surface Elevation:	486.81 ft amsl	Boring No.: MW-93	
Date Completed:	02/18/2020	Northing (NAD83):	2104450.54		
Drilling Co.:	Cascade	Easting (NAD83):	7614733.00	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	217 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart Longyear Track Mount	Borehole Diameter:	6-12 inches	Location:	PG&E Topock, Needles, California
Driller Name:	Eddie Ramos	Depth to First Water:	31.8 ft bgs	Project Number:	RC000753.0051
Drilling Asst:	J. Candelaria / F. Sandoval	Sampling Method:	4 inch x 10 ft Core Barrel		
Logger:	S. McGrane / G. Jeffers	Sampling Interval:	Continuous		
Editor:	Grant Willford	Converted to Well:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description	Drilling Notes	Drilling Fluid
41	114			Topock - Alluvium Deposits	ML		(40.8 - 42.3') Topock - Alluvium Deposits; Silty sand with gravel (SM); grayish brown (10YR 5/2); very fine grained to very coarse grained, angular to round; little granules to very large pebbles, angular to subround; little silt; trace clay; coarser clasts composed of metadiorite; moist		
42				Topock - Alluvium Deposits	SM		(42.3 - 43.5') Topock - Alluvium Deposits; Sandy silt with gravel (ML); grayish brown (10YR 5/2); no plasticity; some very fine to very coarse grained sand, angular to subangular; little granules to very large pebbles, angular to subangular; little clay; coarser clasts composed of metadiorite; moist; very stiff		
43				Topock - Alluvium Deposits	ML		(43.5 - 46.5') Topock - Alluvium Deposits; Clayey sand with gravel (SC); grayish brown (10YR 5/2); very fine grained to very coarse grained, angular to subangular; little granules to very large pebbles, angular to subangular; little clay; trace silt; coarser clasts composed of metadiorite; dry (45'); wet; silt lense with gravel		
44				Topock - Alluvium Deposits	SC		(46.5 - 47.0') No recovery (NR); see drilling notes		
45	No Sieve Samples Collected			Topock - Alluvium Deposits	GW		(47.0 - 50.5') Topock - Alluvium Deposits; Well graded gravel with sand (GW); brown (10YR 4/3); granules to medium pebbles, angular to subround; some very fine to very coarse grained sand, angular to subround; little large to very large pebbles, angular to subangular; trace silt; coarser clasts composed of metadiorite; wet	(44.0 - 46.0') Drilling got hard	
46				Topock - Alluvium Deposits	NR		(46.5 - 47.0') No recovery (NR); see drilling notes	(46.0 - 47.0') Soft drilling, lost 0.5 ft down hole.	
47				Topock - Alluvium Deposits	ML		(50.5 - 51.5') Topock - Alluvium Deposits; Sandy silt with gravel (ML); grayish brown (10YR 5/2); low plasticity; some very fine to very coarse grained sand, angular to subround; little granules to very large pebbles, angular to subangular; trace small cobbles, subangular; trace clay; coarser clasts composed of metadiorite; wet; soft		
48				Topock - Alluvium Deposits	SW		(51.5 - 52.5') Topock - Alluvium Deposits; Well graded sand with gravel (SW); brown (10YR 5/3); very fine grained to very coarse grained, subangular to subround; little granules to very large pebbles, angular to subangular; trace silt; trace clay; coarser clasts composed of metadiorite; wet		
49				Topock - Alluvium Deposits	SM		(52.5 - 54.5') Topock - Alluvium Deposits; Silty sand with gravel (SM); grayish brown (10YR 5/2); very fine grained to very coarse grained, angular to subround; little granules to very large pebbles, angular to subround; little silt; trace clay; coarser clasts composed of metadiorite; moist to wet		
50				Topock - Alluvium Deposits	ML		(54.5 - 55.0') Topock - Alluvium Deposits; Sandy silt (ML); weak red (2.5YR 5/2); little granules to very large pebbles, angular to subangular; little clay; trace very fine to very coarse grained sand, angular to round; very stiff; no odor; no staining		
51				Topock - Alluvium Deposits	SM		(55.0 - 56.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); dark yellowish brown (10YR 4/4); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; some silt; trace clay; coarser clasts composed of metadiorite; moist to wet		
52				Topock - Alluvium Deposits	SM		(56.0 - 59.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); yellowish brown / moderate yellowish brown (10YR 5/4); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; little silt; coarser clasts composed of metadiorite; wet		
53				Topock - Alluvium Deposits	SM		(59.0 - 62.0') Topock - Alluvium Deposits; Silty sand with gravel		
54				Topock - Alluvium Deposits	SM				
55	180			Topock - Alluvium Deposits	SM		(55.0 - 56.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); dark yellowish brown (10YR 4/4); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; some silt; trace clay; coarser clasts composed of metadiorite; moist to wet		
56				Topock - Alluvium Deposits	SM		(56.0 - 59.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); yellowish brown / moderate yellowish brown (10YR 5/4); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; little silt; coarser clasts composed of metadiorite; wet		
57				Topock - Alluvium Deposits	SM		(59.0 - 62.0') Topock - Alluvium Deposits; Silty sand with gravel		
58				Topock - Alluvium Deposits	SM				
59				Topock - Alluvium Deposits	SM		(59.0 - 62.0') Topock - Alluvium Deposits; Silty sand with gravel		
60				Topock - Alluvium Deposits	SM		(59.0 - 62.0') Topock - Alluvium Deposits; Silty sand with gravel		

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measured during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-93-50, MW-93-213 installed in borehole

Date Started: 02/04/2020	Surface Elevation: 486.81 ft amsl	Boring No.: MW-93
Date Completed: 02/18/2020	Northing (NAD83): 2104450.54	
Drilling Co.: Cascade	Easting (NAD83): 7614733.00	Client: PG&E
Drilling Method: Sonic Drilling	Total Depth: 217 ft bgs	Project: Final GW Remedy Phase 1
Drill Rig Type: Boart Longyear Track Mount	Borehole Diameter: 6-12 inches	Location: PG&E Topock, Needles, California
Driller Name: Eddie Ramos	Depth to First Water: 31.8 ft bgs	Project Number: RC000753.0051
Drilling Asst: J. Candelaria / F. Sandoval	Sampling Method: 4 inch x 10 ft Core Barrel	
Logger: S. McGrane / G. Jeffers	Sampling Interval: Continuous	
Editor: Grant Willford	Converted to Well: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description	Drilling Notes	Drilling Fluid
61	180			Topock - Alluvium Deposits	SM	(SM); brown (10YR 5/3); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; little silt; trace small cobbles, subangular; trace clay; coarser clasts composed of metadiorite; wet (61'); moist			
62				Topock - Alluvium Deposits	SM	(62.0 - 65.8') Topock - Alluvium Deposits; Silty sand with gravel (SM); dark yellowish brown (10YR 4/4); very fine grained to very coarse grained, angular to subround; little granules to large pebbles, angular to subround; little silt; wet	(62.0 - 77.0') Normal drilling, confirmed with driller 100% recovery in core barrel, 2 ft missing due to compaction.		
63				Topock - Alluvium Deposits	SM	(65.8 - 66.5') Topock - Alluvium Deposits; Silty sand with gravel (SM); grayish brown (10YR 5/2); very fine grained to very coarse grained, angular to subround; some silt; little granules to very large pebbles, angular to subround; trace small cobbles, subangular; trace clay; wet			
64				Topock - Alluvium Deposits	SW-SM	(66.5 - 71.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (10YR 4/3); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; little silt; trace clay; trace coarser clasts composed of metadiorite; wet			
65				Topock - Alluvium Deposits	ML	(71.0 - 72.5') Topock - Alluvium Deposits; Sandy silt with gravel (ML); grayish brown (2.5Y 5/2); low plasticity; some granules to very large pebbles, angular to subround; some very fine to very coarse grained sand, angular to subround; trace large cobbles, subround; trace clay; coarser clasts composed of metadiorite; wet; soft			
66				Topock - Alluvium Deposits	SW-SM	(72.5 - 77.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (7.5YR 4/4); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; little silt; trace clay; coarser clasts composed of metadiorite; wet			
67				Topock - Alluvium Deposits	GM	(77.0 - 78.5') Topock - Alluvium Deposits; Silty gravel with sand (GM); dark yellowish brown (10YR 4/4); granules to very large pebbles, angular to subround; some very fine to very coarse grained sand, angular to subround; some silt; trace clay; coarser clasts composed of metadiorite; wet	(77.0 - 97.0') Soft drilling		
68				Topock - Alluvium Deposits	GW-GM	(78.5 - 80.2') Topock - Alluvium Deposits; Well graded gravel with silt and sand (GW-GM); dark yellowish brown (10YR 4/4); granules to very large pebbles, angular to subround; some very fine to very coarse grained sand, subangular to subround; little silt; coarser clasts composed of metadiorite; wet; green staining			
69	156	No Sieve Samples Collected							
70									
71									
72									
73									
74			MW-93-VAS-72-77 (<0.033 U ppb) 2/7/2020 11:23						
75									
76									
77									
78	240								
79									
80									

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measured during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-93-50, MW-93-213 installed in borehole

SOIL BORING LOG: PG&E-TOPOCK-C:\USERS\MCGRANE\DOCUMENTS\PG&E-TOPOCK\DRIFT BORING LOGS\GINT FILES\11.30.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/02/20 21:10

Date Started: 02/04/2020	Surface Elevation: 486.81 ft amsl	Boring No.: MW-93
Date Completed: 02/18/2020	Northing (NAD83): 2104450.54	
Drilling Co.: Cascade	Easting (NAD83): 7614733.00	Client: PG&E
Drilling Method: Sonic Drilling	Total Depth: 217 ft bgs	Project: Final GW Remedy Phase 1
Drill Rig Type: Boart Longyear Track Mount	Borehole Diameter: 6-12 inches	Location: PG&E Topock, Needles, California
Driller Name: Eddie Ramos	Depth to First Water: 31.8 ft bgs	Project Number: RC000753.0051
Drilling Asst: J. Candelaria / F. Sandoval	Sampling Method: 4 inch x 10 ft Core Barrel	
Logger: S. McGrane / G. Jeffers	Sampling Interval: Continuous	
Editor: Grant Willford	Converted to Well: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description	Drilling Notes	Drilling Fluid
81				Topock - Alluvium Deposits	SM		(80.2 - 84.5') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (10YR 4/3); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; some silt; trace clay; coarser clasts composed of metadiorite; wet		
82			(82.5'); little silt; increase in sand						
83				Topock - Alluvium Deposits	ML		(84.5 - 85.0') Topock - Alluvium Deposits; Sandy silt (ML); brown (10YR 4/3); some very fine to very coarse grained sand, angular to subround; little large to very large pebbles, angular to subangular; coarser clasts composed of metadiorite; wet; medium stiff		
84							Topock - Alluvium Deposits	SM	
85				Topock - Alluvium Deposits	SM				
86							Topock - Alluvium Deposits	SM	
87				Topock - Alluvium Deposits	SM				
88	240	No Sieve Samples Collected					Topock - Alluvium Deposits	SM	
89				Topock - Alluvium Deposits	SM				
90							Topock - Alluvium Deposits	SM	
91				Topock - Alluvium Deposits	SM				
92							Topock - Alluvium Deposits	SM	
93				Topock - Alluvium Deposits	SW				
94							Topock - Alluvium Deposits	SW	
95				Topock - Alluvium Deposits	SW				
96							Topock - Alluvium Deposits	SW	
97				Topock - Alluvium Deposits	SW				
98	126						Topock - Alluvium Deposits	SW	
99				Topock - Alluvium Deposits	SW				
100							Topock - Alluvium Deposits	SW	

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SOIL BORING LOG: PG&E-TOPOCK_C:\USERS\MCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\11_30_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/02/20 21:10

Date Started:	02/04/2020	Surface Elevation:	486.81 ft amsl	Boring No.: MW-93	
Date Completed:	02/18/2020	Northing (NAD83):	2104450.54		
Drilling Co.:	Cascade	Easting (NAD83):	7614733.00	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	217 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart Longyear Track Mount	Borehole Diameter:	6-12 inches	Location:	PG&E Topock, Needles, California
Driller Name:	Eddie Ramos	Depth to First Water:	31.8 ft bgs	Project Number:	RC000753.0051
Drilling Asst:	J. Candelaria / F. Sandoval	Sampling Method:	4 inch x 10 ft Core Barrel		
Logger:	S. McGrane / G. Jeffers	Sampling Interval:	Continuous		
Editor:	Grant Willford	Converted to Well:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description	Drilling Notes	Drilling Fluid
101	126			Topock - Alluvium Deposits	SW-SM	(100.5 - 102.0')	Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); dark yellowish brown (10YR 4/4); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; little silt; trace mica; coarser clasts composed of metadiorite; wet		
102				Topock - Alluvium Deposits	SW	(102.0 - 103.5')	Topock - Alluvium Deposits; Well graded sand with gravel (SW); dark yellowish brown (10YR 4/4); very fine grained to very coarse grained, angular to subangular; and granules to very large pebbles, angular to subangular; trace silt; trace mica; coarser clasts composed of metadiorite; wet		
103				Topock - Alluvium Deposits	SW-SM	(103.5 - 111.0')	Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (7.5YR 4/4); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; little silt; trace mica; coarser clasts composed of metadiorite; wet; blocky; iron oxide staining; weathered metadiorite gravel		
104	No Sieve Samples Collected			Topock - Alluvium Deposits	SW-SM	(108')	increase in granules and pebbles, decrease in sand	(107.0 - 117.0') Soft drilling	
105				Topock - Alluvium Deposits	SM	(111.0 - 114.5')	Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (7.5YR 4/4) and strong brown (7.5YR 4/6); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; little silt; trace mica; coarser clasts composed of metadiorite; wet; mottled; iron oxide staining		
106				Topock - Alluvium Deposits	SM	(114')	wet; increase in silt, decrease in sand		
107				Topock - Alluvium Deposits	SW	(114.5 - 117.0')	Topock - Alluvium Deposits; Well graded sand with gravel (SW); brown (7.5YR 4/4); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; trace silt; trace mica; coarser clasts composed of metadiorite; wet		
108				Topock - Alluvium Deposits	SM	(117.0 - 119.5')	Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (7.5YR 5/4); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; little silt; trace mica; coarser clasts composed of metadiorite; wet; iron oxide staining (118'); decrease in silt, increase in sand	(117.0 - 127.0') Normal drilling, extra recovery due to stretching of sediments during bagging.	
109	120			Topock - Alluvium Deposits	SW-SM	(119.5 - 127.0')	Topock - Alluvium Deposits; Well graded sand		
110									
111									
112	127.2								
113									
114									
115									
116									
117									
118									
119									
120									

MW-93-VAS-112-117 (<0.033 U ppb) 2/8/2020 09:08

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measured during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-93-50, MW-93-213 installed in borehole

SOIL BORING LOG: PG&E TOPOCK C:\USERS\MCGRANE\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILE\11_30_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/02/20 21:10

Date Started:	02/04/2020	Surface Elevation:	486.81 ft amsl	Boring No.: MW-93	
Date Completed:	02/18/2020	Northing (NAD83):	2104450.54		
Drilling Co.:	Cascade	Easting (NAD83):	7614733.00	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	217 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart Longyear Track Mount	Borehole Diameter:	6-12 inches	Location:	PG&E Topock, Needles, California
Driller Name:	Eddie Ramos	Depth to First Water:	31.8 ft bgs	Project Number:	RC000753.0051
Drilling Asst:	J. Candelaria / F. Sandoval	Sampling Method:	4 inch x 10 ft Core Barrel		
Logger:	S. McGrane / G. Jeffers	Sampling Interval:	Continuous		
Editor:	Grant Willford	Converted to Well:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description	Drilling Notes	Drilling Fluid
121	127.2			Topock - Alluvium Deposits	SW-SM		with silt and gravel (SW-SM); dark yellowish brown (10YR 4/4); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; little silt; little mica; coarser clasts composed of metadiorite; wet		
122									
123									
124									
125									
126	129.6	No Sieve Samples Collected		Topock - Alluvium Deposits	SM		(127.0 - 129.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); yellowish brown (10YR 5/6) and brown (10YR 4/3); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; little silt; trace small cobbles, subangular; trace mica; coarser clasts composed of metadiorite; wet; mottled; weathered metadiorite	(127.0 - 137.0') Normal drilling, extra recovery due to stretching of sediments during bagging.	
127									
128									
129									
130									
131	128.4			Topock - Alluvium Deposits	SW		(129.0 - 132.5') Topock - Alluvium Deposits; Well graded sand with gravel (SW); dark yellowish brown (10YR 4/4); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; trace silt; little mica; coarser clasts composed of metadiorite; wet		
132									
133									
134									
135									
136				Topock - Alluvium Deposits	SW-SM		(132.5 - 138.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); dark yellowish brown (10YR 4/4) and yellowish brown (10YR 5/6); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; little silt; little mica; coarser clasts composed of metadiorite; wet; mottled		
137									
138									
139									
140				Topock - Alluvium Deposits	SW		(138.0 - 139.0') Topock - Alluvium Deposits; Well graded sand with gravel (SW); yellowish brown / moderate yellowish brown (10YR 5/4); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; trace silt; little mica; coarser clasts composed of metadiorite; wet	(137.0 - 147.0') Normal drilling, extra recovery due to stretching of sediments when bagging.	
			Topock - Alluvium Deposits	SW-SM		(134.5') trace small cobbles, angular to subangular; iron oxide staining; weathered metadiorite clast			

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SOIL BORING LOG: PG&E-TOPOCK-C:\USERS\MCGRANE\DOCUMENTS\PG&E-TOPOCK\DRIFT BORING LOGS\GINT FILES\11.30.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/02/20 21:10

Date Started:	02/04/2020	Surface Elevation:	486.81 ft amsl	Boring No.: MW-93	
Date Completed:	02/18/2020	Northing (NAD83):	2104450.54		
Drilling Co.:	Cascade	Easting (NAD83):	7614733.00	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	217 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart Longyear Track Mount	Borehole Diameter:	6-12 inches	Location:	PG&E Topock, Needles, California
Driller Name:	Eddie Ramos	Depth to First Water:	31.8 ft bgs	Project Number:	RC000753.0051
Drilling Asst:	J. Candelaria / F. Sandoval	Sampling Method:	4 inch x 10 ft Core Barrel		
Logger:	S. McGrane / G. Jeffers	Sampling Interval:	Continuous		
Editor:	Grant Willford	Converted to Well:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description	Drilling Notes	Drilling Fluid
141	128.4			Topock - Alluvium Deposits	SW-SM	(139.0 - 143.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); dark yellowish brown (10YR 4/4) and brown (7.5YR 4/4); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; little silt; little mica; coarser clasts composed of metadiorite; wet; mottled; iron oxide staining			
142					(142.5'); weathered metadiorite boulder				
143					(143.0 - 147.0') Topock - Alluvium Deposits; Well graded sand with gravel (SW); yellowish brown / moderate yellowish brown (10YR 5/4); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; trace silt; little mica; coarser clasts composed of metadiorite; moist to wet				
144									
145	120	No Sieve Samples Collected		Topock - Alluvium Deposits	SW			(147.0 - 157.0') Normal drilling	
146									
147									
148					(147.0 - 149.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); grayish brown (10YR 5/2); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; little silt; trace mica; coarser clasts composed of metadiorite; wet				
149				(148'); some silt; decrease in sand, decrease in granules and pebbles					
150				Topock - Alluvium Deposits	SW	(149.0 - 152.5') Topock - Alluvium Deposits; Well graded sand with gravel (SW); brown (7.5YR 5/4); very fine grained to very coarse grained, angular to subangular; and granules to very large pebbles, angular to subangular; little small cobbles, subangular; trace silt; trace mica; coarser clasts composed of metadiorite; wet			
151									
152				Topock - Alluvium Deposits	SW-SM	(152.5 - 157.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (7.5YR 5/4); very fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; little silt; trace mica; coarser clasts composed of metadiorite; wet			
153									
154						(153.2'); 3" silty sand with gravel lense, very fine to very coarse grained sand, some silt, some granules to large pebbles, trace large cobbles			
155									
156									
157									
158	168			Topock - Alluvium Deposits	SM	(157.0 - 160.5') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (10YR 5/3); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; little silt; little clay; trace small cobbles, angular; coarser clasts composed of metadiorite; wet			
159									
160									

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SOIL BORING LOG: PG&E-TOPOCK-C:\USERS\MCGRANE\DOCUMENTS\PG&E-TOPOCK\DRIFT BORING LOGS\GINT FILES\1130_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/02/20 21:10

Date Started: 02/04/2020	Surface Elevation: 486.81 ft amsl	Boring No.: MW-93
Date Completed: 02/18/2020	Northing (NAD83): 2104450.54	
Drilling Co.: Cascade	Easting (NAD83): 7614733.00	Client: PG&E
Drilling Method: Sonic Drilling	Total Depth: 217 ft bgs	Project: Final GW Remedy Phase 1
Drill Rig Type: Boart Longyear Track Mount	Borehole Diameter: 6-12 inches	Location: PG&E Topock, Needles, California
Driller Name: Eddie Ramos	Depth to First Water: 31.8 ft bgs	Project Number: RC000753.0051
Drilling Asst: J. Candelaria / F. Sandoval	Sampling Method: 4 inch x 10 ft Core Barrel	
Logger: S. McGrane / G. Jeffers	Sampling Interval: Continuous	
Editor: Grant Willford	Converted to Well: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description	Drilling Notes	Drilling Fluid		
161				Topock - Alluvium Deposits	SM		(160.5 - 162.5') Topock - Alluvium Deposits; Silty gravel with sand (GM); dark yellowish brown (10YR 4/4); granules to small pebbles, angular to subround; and very fine to very coarse grained sand, angular to subround; little medium to large pebbles, angular to subangular; little silt; wet				
162					GM						
163				Topock - Alluvium Deposits	SM		(162.5 - 170.2') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (10YR 5/3); very fine grained to very coarse grained, angular to subround; little granules to large pebbles, subangular to round; little silt; little clay; coarser clasts composed of metadiorite; wet				
164											
165											
166											
167	168						(167'); some granules to very large pebbles, angular to subround; trace clay				
168							(168'); little clay; decrease in sand, increase in silt				
169											
170		No Sieve Samples Collected									
171				Topock - Alluvium Deposits	SW-SM		(170.2 - 171.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); grayish brown (10YR 5/2); very fine grained to very coarse grained, angular to subround; little granules to very large pebbles, angular to subround; little silt; wet				
172					NR		(171.0 - 174.0') No recovery (NR); see drilling notes	(171.0 - 174.0') No recovery, lost core downhole.			
173											
174			MW-93-VAS-172-177 (<0.17 U ppb) 2/10/2020 09:28								
175	36			Topock - Alluvium Deposits	SW-SM		(174.0 - 176.5') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (7.5YR 4/3); very fine grained to very coarse grained, angular to subround; little granules to very large pebbles, angular to subround; little silt; wet	(174.0 - 177.0') Normal drilling			
176											
177				Topock - Alluvium Deposits	ML		(176.5 - 179.5') Topock - Alluvium Deposits; Sandy silt (ML); dark yellowish brown (10YR 4/4); low plasticity; some very fine to very coarse grained sand, angular to subround; little granules to very large pebbles, angular to subangular; coarser clasts composed of metadiorite; wet; very stiff				
178									(178'); trace clay	(177.0 - 187.0') Normal drilling	
179	120										
180					SM		(179.5 - 181.5') Topock - Alluvium Deposits; Silty sand with gravel				

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SOIL BORING LOG: PG&E TOPOCK C:\USERS\MCGRANE\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\11_30_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/02/20 21:10

Date Started:	02/04/2020	Surface Elevation:	486.81 ft amsl	Boring No.: MW-93	
Date Completed:	02/18/2020	Northing (NAD83):	2104450.54		
Drilling Co.:	Cascade	Easting (NAD83):	7614733.00	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	217 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart Longyear Track Mount	Borehole Diameter:	6-12 inches	Location:	PG&E Topock, Needles, California
Driller Name:	Eddie Ramos	Depth to First Water:	31.8 ft bgs	Project Number:	RC000753.0051
Drilling Asst:	J. Candelaria / F. Sandoval	Sampling Method:	4 inch x 10 ft Core Barrel		
Logger:	S. McGrane / G. Jeffers	Sampling Interval:	Continuous		
Editor:	Grant Willford	Converted to Well:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description	Drilling Notes	Drilling Fluid
181	120			Topock - Alluvium Deposits	SM		(SM); brown (7.5YR 5/2); very fine grained to very coarse grained; some granules to very large pebbles, angular to subround; some silt; trace small cobbles, angular; coarser clasts composed of metadiorite; moist to wet		
182				Topock - Alluvium Deposits	ML		(181.5 - 183.3') Topock - Alluvium Deposits; Sandy silt with gravel (ML); brown (7.5YR 5/3); low plasticity; some very fine to very coarse grained sand, angular to subround; little granules to very large pebbles, angular to subangular; coarser clasts composed of metadiorite; moist to wet; very stiff		
183				Topock - Alluvium Deposits	SM		(183.3 - 187.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (7.5YR 4/3); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subangular; some silt; coarser clasts composed of metadiorite; moist to wet		
184	120	No Sieve Samples Collected		Topock - Alluvium Deposits	SM		(187.0 - 187.8') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (7.5YR 4/4); very fine grained to very coarse grained, angular to subround; little granules to very large pebbles, angular to subangular; little silt; trace clay; coarser clasts composed of metadiorite; wet	(187.0 - 194.0') Normal drilling	
185				Topock - Alluvium Deposits	ML		(187.8 - 188.3') Topock - Alluvium Deposits; Sandy silt with gravel (ML); brown (7.5YR 4/3); low plasticity; some very fine to very coarse grained sand, angular to subround; little granules to large pebbles, angular to subangular; trace clay; coarser clasts composed of metadiorite; moist to wet; very stiff		
186				Topock - Alluvium Deposits	SM		(188.3 - 191.8') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (7.5YR 4/4); very fine grained to very coarse grained, angular to subround; little granules to very large pebbles, angular to subangular; little silt; trace clay; coarser clasts composed of metadiorite; wet		
187				Topock - Alluvium Deposits	SM		(190'); increase in sand, decrease in silt		
188				Topock - Alluvium Deposits	SM		(191.8 - 192.8') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (10YR 4/3); very fine grained to very coarse grained, angular to subround; little granules to small pebbles, angular to subround; little silt; trace small cobbles, subangular; coarser clasts composed of metadiorite; wet		
189	120			Topock - Alluvium Deposits	SM		(192.8 - 197.0') Silty sand with gravel (SM); brown (7.5YR 4/3); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subangular; some silt; trace clay; coarser clasts composed of metadiorite; moist to wet	(194.0 - 195.0') Hard drilling	
190				Topock - Alluvium Deposits	SM		(193.6') (GLEY1 3/4); 0.4 inch silt lense, trace small cobbles subangular	(195.0 - 197.0') Soft drilling	
191				Topock - Alluvium Deposits	SM		(194'); little silt; increase in sand		
192	120			Topock - Alluvium Deposits	SM		(197.0 - 204.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (7.5YR 4/4); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; some silt; coarser clasts composed of metadiorite; wet	(197.0 - 207.0') Soft drilling	
193				Topock - Alluvium Deposits	SM		(198'); little granules to large pebbles, angular to subround; little silt; increase in sand		
194				Topock - Alluvium Deposits	SM				

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, NR = no recovery; Notes: blue water table symbol represents depth to water measured during the first VAS interval; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-93-50, MW-93-213 installed in borehole

SOIL BORING LOG: PG&E TOPOCK C:\USERS\MCGRANE\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\11_30_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 12/02/20 21:10

Date Started:	02/04/2020	Surface Elevation:	486.81 ft amsl	Boring No.: MW-93	
Date Completed:	02/18/2020	Northing (NAD83):	2104450.54		
Drilling Co.:	Cascade	Easting (NAD83):	7614733.00	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	217 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart Longyear Track Mount	Borehole Diameter:	6-12 inches	Location:	PG&E Topock, Needles, California
Driller Name:	Eddie Ramos	Depth to First Water:	31.8 ft bgs	Project Number:	RC000753.0051
Drilling Asst:	J. Candelaria / F. Sandoval	Sampling Method:	4 inch x 10 ft Core Barrel		
Logger:	S. McGrane / G. Jeffers	Sampling Interval:	Continuous		
Editor:	Grant Willford	Converted to Well:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description	Drilling Notes	Drilling Fluid	
201	120			Topock - Alluvium Deposits	SM	[Symbol]	(200'); trace small cobbles, angular (200.2'); some granules to very large pebbles, angular to subround; decrease in sand, increase in silt			
202							(201.5'); increase in sand, decrease in silt			
203							(203.3'); trace small cobbles, subangular			
204							(203.5'); decrease in sand, increase in silt			
205				Topock - Alluvium Deposits	CL	[Symbol]	(204.0 - 204.5') Topock - Alluvium Deposits; Sandy lean clay with gravel (CL); dark grayish brown / dark yellowish brown (10YR 4/2); low plasticity; some very fine to very coarse grained sand, angular to subround; little granules to very large pebbles, angular to subround; little silt; trace small cobbles, subangular; wet; very stiff			
206				Topock - Alluvium Deposits	SM	[Symbol]	(204.5 - 205.2') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (7.5YR 4/4); very fine grained to very coarse grained, angular to subround; some silt; little granules to very large pebbles, angular to subround; trace small cobbles, angular; trace clay; coarser clasts composed of metadiorite; wet			
207				Topock - Alluvium Deposits	SM	[Symbol]	(205.2 - 207.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); brown (7.5YR 5/3); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; little silt; coarser clasts composed of metadiorite; wet (206'); trace clay; decrease in sand			
208		No Sieve Samples Collected			Topock - Alluvium Deposits	ML	[Symbol]			(207.0 - 210.5') Topock - Alluvium Deposits; Sandy silt with gravel (ML); dark grayish brown / dark yellowish brown (10YR 4/2); low plasticity; some very fine to very coarse grained sand, angular to subround; little granules to very large pebbles, angular to subangular; trace small cobbles, angular; coarser clasts composed of metadiorite; moist to wet; very stiff
209										(210.5 - 212.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); dark yellowish brown (10YR 4/4); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; some silt; trace small cobbles, subangular; coarser clasts composed of metadiorite; moist to wet (211'); little silt; increase in sand
210										(212.0 - 214.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); dark yellowish brown (10YR 4/4); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; some silt; trace clay; coarser clasts composed of metadiorite; moist to wet
211							(214.0 - 216.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); dark yellowish brown (10YR 4/4); very fine grained to very coarse grained, angular to subround; some granules to very large pebbles, angular to subround; little silt; coarser clasts composed of metadiorite; wet			
212	127.2				Topock - Alluvium Deposits	SM	[Symbol]	(216.0 - 217.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (7.5YR 4/4); very fine grained to very coarse grained, angular to subround; little granules to very large pebbles, angular to subround; little silt; coarser clasts composed of metadiorite; wet		
213										
214					MW-93-VAS-212-217 (<0.17 U ppb) 2/11/2020 13:18	Topock - Alluvium Deposits	SM	[Symbol]		
215						Topock - Alluvium Deposits	SM	[Symbol]		
216					Topock - Alluvium Deposits	SW-SM	[Symbol]			
217									(215.0 - 217.0') 1300 gallons of water used; 1300 gallons of water recovered; 0 gallons of water lost	
218							End of Boring at 217.0 ft bgs.			
219										
220										

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