

Date Started:	07/31/2019	Surface Elevation:	483.71 ft amsl	Boring No.: MW-82d	
Date Completed:	08/22/2019	Northing (NAD83):	2103048.25		
Drilling Co.:	Cascade	Easting (NAD83):	7615993.33	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	207 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart	Borehole Diameter:	4-12 inches	Location:	PG&E Topock, Topock, California
Driller Name:	Eddie Ramos	Depth to First Water:	28.5 ft bgs		
Drilling Asst:	J. Colon / F. Sandoval	Sampling Method:	4 inch x 10 ft. Core Barrel	Project Number:	RC000753.0051
Logger:	JL / PK / AP	Sampling Interval:	Continuous		
Editor:	Sean McGrane	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	0				NR		(0.0 - 7.0') No recovery (NR); see drilling notes	(0.0 - 7.0') Advanced conductor casing to 7 ft bgs did not log material from clean out run. Used bentonite and small amount of water to keep side of borehole from caving in around conductor casing.	(0.0 - 203.0') gallons of water used; gallons of water recovered; gallons of water lost; Flushed casing with water prior to well install.
2									
3									
4									
5									
6									
7									
8	No sieve samples collected			Topock - Fill	SP		(7.0 - 11.0') Topock - Fill; Poorly graded sand (SP); yellowish brown / moderate yellowish brown (10YR 5/4); very fine grained to fine grained, subangular to subround; dry		
9									
10									
11									
12	48				NR		(11.0 - 17.0') No recovery (NR); see drilling notes	(11.0 - 17.0') No recovery due to loose dredge sands	
13									
14									
15									
16									
17	60			Topock - Fill	SP		(17.0 - 22.0') Topock - Fill; Poorly graded sand (SP); yellowish brown / moderate yellowish brown (10YR 5/4); very fine grained to fine grained, subangular to subround; dry		
18									
19									
20									

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SOIL BORING LOG: PG&E-TOPOCK_C:\USERS\SMCGRANE\DOCUMENTS\PG&E_TOPOCK\DRIFT BORING LOGS\GINT FILES\06_29_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 06/29/20 15:32

Date Started:	07/31/2019	Surface Elevation:	483.71 ft amsl	Boring No.: MW-82d	
Date Completed:	08/22/2019	Northing (NAD83):	2103048.25		
Drilling Co.:	Cascade	Easting (NAD83):	7615993.33	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	207 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart	Borehole Diameter:	4-12 inches	Location:	PG&E Topock, Topock, California
Driller Name:	Eddie Ramos	Depth to First Water:	28.5 ft bgs		
Drilling Asst:	J. Colon / F. Sandoval	Sampling Method:	4 inch x 10 ft. Core Barrel	Project Number:	RC000753.0051
Logger:	JL / PK / AP	Sampling Interval:	Continuous		
Editor:	Sean McGrane	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				Topock - Fill	SP				
22							(22.0 - 27.0') No recovery (NR); see drilling notes	(22.0 - 27.0') No recovery due to loose fluvial sands	
23	60				NR				
24									
25									
26									
27									
28				Topock - Fluvial Deposits	SP		(27.0 - 29.0') Topock - Fluvial Deposits; Poorly graded sand (SP); light yellowish brown (10YR 6/4); very fine grained to fine grained, subangular to subround; moist		
29									
30		No sieve samples collected					(29.0 - 37.0') No recovery (NR); see drilling notes	(29.0 - 37.0') No recovery due to loose fluvial sands	
31									
32	24								
33					NR			(32.0') Poor recovery and nonproducing sample intervals made it difficult to determine static water level. Installed temporary well with 20 foot screen interval and collected low flow samples at 32-37 ft and 47 to 52 ft.	
34			MW-H-VAS-32-37 (< 0.17 U ppb) 8/7/2019 11:30						
35									
36									
37									
38				Topock - Fluvial Deposits	SP		(37.0 - 42.0') Topock - Fluvial Deposits; Poorly graded sand (SP); yellowish brown / moderate yellowish brown (10YR 5/4); very fine grained to fine grained, subangular to subround; dry	(37.0 - 47.0') Soft Drilling	(37.0 - 47.0') 130 gallons of water used; 80 gallons of water recovered; 50 gallons of water lost
39	120								
40									

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SOIL BORING LOG: PG&E TOPOCK C:\USERS\MCGRANE\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\06_29_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 06/29/20 15:32

Date Started:	07/31/2019	Surface Elevation:	483.71 ft amsl	Boring No.: MW-82d	
Date Completed:	08/22/2019	Northing (NAD83):	2103048.25		
Drilling Co.:	Cascade	Easting (NAD83):	7615993.33	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	207 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart	Borehole Diameter:	4-12 inches	Location:	PG&E Topock, Topock, California
Driller Name:	Eddie Ramos	Depth to First Water:	28.5 ft bgs		
Drilling Asst:	J. Colon / F. Sandoval	Sampling Method:	4 inch x 10 ft. Core Barrel	Project Number:	RC000753.0051
Logger:	JL / PK / AP	Sampling Interval:	Continuous		
Editor:	Sean McGrane	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	120			Topock - Fluvial Deposits	SP		(42.0 - 47.0') (SP); moist to wet		
42					SP				
43	12	No sieve samples collected	Attempted to collect sample (Interval did not produce.) 8/6/2019 10:00	Topock - Fluvial Deposits	CH		(47.0 - 48.0') Topock - Fluvial Deposits; Fat clay with sand (CH); dark grayish brown / dark yellowish brown (10YR 4/2); high plasticity; and very fine to fine grained sand, angular to subangular; little silt; moist to wet; very soft to soft	(47.0 - 52.0') Poor recovery loose sands fell out of core barrel into mud tub before it could be bagged. Archaeologist were notified of clay unit.	
44					NR				
45					NR				
46					NR				
47	36		MW-H-VAS-47-52 (< 0.17 U ppb) 8/7/2019 13:30	Topock - Fluvial Deposits	SP		(52.0 - 53.0') Topock - Fluvial Deposits; Poorly graded sand (SP); brown (7.5YR 5/4); very fine grained to fine grained; little silt; wet	(52.0 - 57.0') Partial recovery loose sands, removed sand from temporary well. Contacts adjusted based on QC review with rig geo and photo log.	(52.0 - 57.0') 5 gallons of water used; 5 gallons of water recovered; 0 gallons of water lost
48					SW-SM		(53.0 - 54.0') Topock - Fluvial Deposits; Well graded sand with silt (SW-SM); light brown (7.5YR 6/4); very fine grained to very coarse grained, angular to round; little silt; wet		
49					SW		(54.0 - 55.0') Topock - Fluvial Deposits; Well graded sand with gravel (SW); light brown (7.5YR 6/4); very fine grained to very coarse grained, angular to round; little medium to large pebbles, subround to round; trace silt; trace clay; wet		
50					NR		(55.0 - 57.0') No recovery (NR)		
51					NR				
52					NR				
53	48			Topock - Fluvial Deposits	SP-SM		(57.0 - 59.0') Topock - Fluvial Deposits; Poorly graded sand with silt (SP-SM); light brown (7.5YR 6/4); very fine grained to fine grained; little silt; wet	(57.0 - 87.0') Normal drilling with 6-inch and 10-inch casings. Contacts and drill runs adjusted based on QC review with rig geo and	
54					SW-SM		(59.0 - 61.0') Topock - Fluvial Deposits; Well graded sand with silt (SW-SM); light brown (7.5YR 6/4); very fine grained to very coarse grained, angular to round; little silt; wet		
55					SW-SM				

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SOIL BORING LOG: PG&E TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\06_29_2010\TOPOCK DATA TEMPLATE FOR PLOG.GDT 06/29/20 15:32

Date Started: 07/31/2019	Surface Elevation: 483.71 ft amsl	Boring No.: MW-82d
Date Completed: 08/22/2019	Northing (NAD83): 2103048.25	
Drilling Co.: Cascade	Easting (NAD83): 7615993.33	Client: PG&E
Drilling Method: Sonic Drilling	Total Depth: 207 ft bgs	Project: Final GW Remedy Phase 1
Drill Rig Type: Boart	Borehole Diameter: 4-12 inches	Location: PG&E Topock, Topock, California
Driller Name: Eddie Ramos	Depth to First Water: 28.5 ft bgs	
Drilling Asst: J. Colon / F. Sandoval	Sampling Method: 4 inch x 10 ft. Core Barrel	Project Number: RC000753.0051
Logger: JL / PK / AP	Sampling Interval: Continuous	
Editor: Sean McGrane	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	48			Topock - Fluvial Deposits	SW-SM		(61.0 - 67.0') No recovery (NR)	photo logs.	
62				NR					
63	84	No sieve samples collected		Topock - Fluvial Deposits	SW-SM		(67.0 - 68.0') Topock - Fluvial Deposits; Well graded sand with silt (SW-SM); light brown (7.5YR 6/4); very fine grained to very coarse grained, angular to round; little silt; wet		
64				Topock - Fluvial Deposits	GW-GM		(68.0 - 70.0') Topock - Fluvial Deposits; Well graded gravel with silt (GW-GM); brown (7.5YR 4/2) trace yellowish brown (10YR 5/8); granules to very large pebbles, angular to subround; little small cobbles, subround to round; little fine to very coarse grained sand, angular to subangular; little silt; coarser clasts composed of metadiorite; moist to wet		
65				Topock - Alluvium Deposits	GM		(70.0 - 72.0') Topock - Alluvium Deposits; Silty gravel with sand (GM); brown (7.5YR 4/3); granules to large pebbles, angular to subround; some fine to very coarse grained sand, angular to subangular; little silt; coarser clasts composed of metadiorite; moist to wet; weak cementation		
66				Topock - Alluvium Deposits	GM		(72.0 - 74.0') Topock - Alluvium Deposits; Silty gravel with sand (GM); brown (7.5YR 4/3); granules to medium pebbles, angular to subround; some fine to very coarse grained sand, angular to subangular; little silt; coarser clasts composed of metadiorite; moist to wet; moderate cementation		
67	120			Topock - Alluvium Deposits	GM		(74.0 - 77.0') No recovery (NR)		
68				NR					
69				Topock - Alluvium Deposits	GM		(77.0 - 79.0') Topock - Alluvium Deposits; Silty gravel with sand (GM); reddish brown (5YR 4/3); granules to very large pebbles, angular to subround; some fine to very coarse grained sand, angular to subround; little silt; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; moist to wet; lensed; weak cementation		
70				Topock - Alluvium Deposits	SW-SM		(79.0 - 81.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (7.5YR 4/3); fine grained to very coarse grained, angular to subround; some granules to large		

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Date Started:	07/31/2019	Surface Elevation:	483.71 ft amsl	Boring No.: MW-82d	
Date Completed:	08/22/2019	Northing (NAD83):	2103048.25		
Drilling Co.:	Cascade	Easting (NAD83):	7615993.33	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	207 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart	Borehole Diameter:	4-12 inches	Location:	PG&E Topock, Topock, California
Driller Name:	Eddie Ramos	Depth to First Water:	28.5 ft bgs		
Drilling Asst:	J. Colon / F. Sandoval	Sampling Method:	4 inch x 10 ft. Core Barrel	Project Number:	RC000753.0051
Logger:	JL / PK / AP	Sampling Interval:	Continuous		
Editor:	Sean McGrane	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	SW-SM		pebbles; little silt; trace clay; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; moist; moderate cementation					
82				Topock - Alluvium Deposits	GW-GM		(81.0 - 82.0') Topock - Alluvium Deposits; Well graded gravel with silt and sand (GW-GM); brown (10YR 4/3); granules to very large pebbles, angular to subangular; little fine to very coarse grained sand, angular to subround; little silt; coarser clasts composed of metadiorite; dry to moist; weak cementation					
83	120		MW-H-VAS-82-87 (< 0.0333 U ppb) 8/8/2019 11:37	Topock - Alluvium Deposits	GM		(82.0 - 85.0') Topock - Alluvium Deposits; Silty gravel (GM); brown (7.5YR 4/3); granules to large pebbles, angular to subangular; some silt; little fine to very coarse grained sand, angular to subround; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; moist to wet; moderate cementation					
84												
85												
86				Topock - Alluvium Deposits	GC		(85.0 - 85.5') Topock - Alluvium Deposits; Clayey gravel (GC); brown (7.5YR 4/4); granules to large pebbles, angular to subangular; some clay; little fine to very coarse grained sand, angular to subround; coarser clasts composed of metadiorite; moist					
87				Topock - Alluvium Deposits	GM		(85.5 - 87.0') Topock - Alluvium Deposits; Silty gravel (GM); brown (7.5YR 5/4); granules to large pebbles, angular to subangular; some silt; little fine to very coarse grained sand, angular to subangular; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; moist; moderate cementation					
88				Topock - Alluvium Deposits	GW-GM		(87.0 - 89.0') Topock - Alluvium Deposits; Well graded gravel with silt and sand (GW-GM); brown (7.5YR 4/3); granules to very large pebbles, angular to subangular; some coarse to very coarse grained sand, angular to subangular; little silt; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet; weak cementation	(87.0 - 135.0') Normal drilling with 6-inch and 10-inch casing.				
89		No sieve samples collected		Topock - Alluvium Deposits	GM		(89.0 - 91.0') Topock - Alluvium Deposits; Silty gravel (GM); brown (7.5YR 4/3); granules to large pebbles, angular to subangular; little fine to very coarse grained sand, angular to subangular; little silt; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet; weak cementation					
90				Topock - Alluvium Deposits	GW-GM		(91.0 - 94.0') Topock - Alluvium Deposits; Well graded gravel with silt and sand (GW-GM); brown (7.5YR 4/3); granules to large pebbles, angular to subangular; little coarse to very coarse grained sand, angular to subangular; little silt; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet; weak cementation					
91				Topock - Alluvium Deposits	GW-GM		(94.0 - 97.0') Topock - Alluvium Deposits; Well graded gravel with silt and sand (GW-GM); reddish brown (5YR 4/3); granules to large pebbles, angular to subangular; little fine to very coarse grained sand, angular to subangular; little silt; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet; weak cementation; core bag ruptured sample disturbed					
92	120			Topock - Alluvium Deposits	GW-GM		(97.0 - 99.0') Topock - Alluvium Deposits; Well graded gravel with sand (GW); brown (7.5YR 4/3); granules to very large pebbles, angular to subangular; some medium to very coarse grained sand, angular to subround; trace silt; wet; weak cementation					
93				Topock - Alluvium Deposits	GW-GM		(99.0 - 101.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); reddish brown (5YR 5/3); fine grained to very coarse grained, angular to subround; and granules to large					
94				Topock - Alluvium Deposits	GW							
95				Topock - Alluvium Deposits	GW							
96				Topock - Alluvium Deposits	GW							
97				Topock - Alluvium Deposits	GW							
98	120			Topock - Alluvium Deposits	GW							
99				Topock - Alluvium Deposits	GW							
100				Topock - Alluvium Deposits	SW-SM							

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Date Started: 07/31/2019	Surface Elevation: 483.71 ft amsl	Boring No.: MW-82d
Date Completed: 08/22/2019	Northing (NAD83): 2103048.25	
Drilling Co.: Cascade	Easting (NAD83): 7615993.33	Client: PG&E
Drilling Method: Sonic Drilling	Total Depth: 207 ft bgs	Project: Final GW Remedy Phase 1
Drill Rig Type: Boart	Borehole Diameter: 4-12 inches	Location: PG&E Topock, Topock, California
Driller Name: Eddie Ramos	Depth to First Water: 28.5 ft bgs	
Drilling Asst: J. Colon / F. Sandoval	Sampling Method: 4 inch x 10 ft. Core Barrel	Project Number: RC000753.0051
Logger: JL / PK / AP	Sampling Interval: Continuous	
Editor: Sean McGrane	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	120			Topock - Alluvium Deposits	SW-SM		pebbles, angular to subangular; little silt; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet; weak cementation		
102				Topock - Alluvium Deposits	SW-SM		(101.0 - 104.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); reddish brown (5YR 4/3); fine grained to very coarse grained, angular to subround; some granules to large pebbles, angular to subangular; trace silt; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet; weak cementation		
103				Topock - Alluvium Deposits	SW-SM		(104.0 - 107.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (7.5YR 4/3); medium grained to very coarse grained, angular to subangular; little granules to medium pebbles, angular to subangular; little silt; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet; weak cementation		
104	120			Topock - Alluvium Deposits	SW-SM		(107.0 - 109.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); brown (7.5YR 5/3); fine grained to very coarse grained, angular to subround; and granules to large pebbles, angular to subround; little silt; coarser clasts composed of metadiorite; trace coarser clast composed of conglomerate; wet; moderate cementation		
105				Topock - Alluvium Deposits	SW-SM		(109.0 - 111.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); reddish brown (5YR 5/3); fine grained to very coarse grained, angular to subangular; and granules to large pebbles, angular to subround; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet; weak cementation		
106				Topock - Alluvium Deposits	SW-SM		(111.0 - 114.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); reddish brown (5YR 5/4); fine grained to very coarse grained, angular to subangular; and granules to very large pebbles, angular to subround; little silt; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet; weak cementation		
107				Topock - Alluvium Deposits	SW-SM		(114.0 - 117.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); reddish brown / moderate brown (5YR 4/4); fine grained to very coarse grained, angular to subangular; and granules to large pebbles, angular to subround; little silt; coarser clasts composed of metadiorite; wet; weak cementation		
108	120	No sieve samples collected		Topock - Alluvium Deposits	SW-SM		(117.0 - 128.0') Topock - Alluvium Deposits; Silty gravel with sand (GM); reddish brown (5YR 4/3); granules to very large pebbles, angular to subround; little medium to very coarse grained sand, angular to subround; little silt; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet; weak cementation		
109				Topock - Alluvium Deposits	SW-SM				
110	120		MW-H-VAS-112-117 (< 0.17 U ppb) 8/9/2019 09:49	Topock - Alluvium Deposits	SW-SM				
111				Topock - Alluvium Deposits	SW-SM				
112				Topock - Alluvium Deposits	SW-SM				
113	120			Topock - Alluvium Deposits	GM				
114				Topock - Alluvium Deposits	GM				
115	120			Topock - Alluvium Deposits	GM				
116				Topock - Alluvium Deposits	GM				
117				Topock - Alluvium Deposits	GM				
118	120			Topock - Alluvium Deposits	GM				
119				Topock - Alluvium Deposits	GM				
120	120			Topock - Alluvium Deposits	GM				

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Date Completed: 08/22/2019	Northing (NAD83): 2103048.25	
Drilling Co.: Cascade	Easting (NAD83): 7615993.33	Client: PG&E
Drilling Method: Sonic Drilling	Total Depth: 207 ft bgs	Project: Final GW Remedy Phase 1
Drill Rig Type: Boart	Borehole Diameter: 4-12 inches	Location: PG&E Topock, Topock, California
Driller Name: Eddie Ramos	Depth to First Water: 28.5 ft bgs	
Drilling Asst: J. Colon / F. Sandoval	Sampling Method: 4 inch x 10 ft. Core Barrel	Project Number: RC000753.0051
Logger: JL / PK / AP	Sampling Interval: Continuous	
Editor: Sean McGrane	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	120			Topock - Alluvium Deposits	GM				
122									
123									
124									
125	No sieve samples collected			Topock - Alluvium Deposits	SW-SM		(128.0 - 136.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); reddish brown / moderate brown (5YR 4/4); 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; trace coarser clast composed of conglomerate; wet; weak cementation		
126									
127									
128									
129									
130									
131									
132									
133									
134									
135	120			Topock - Alluvium Deposits	GW		(136.0 - 137.0') Topock - Alluvium Deposits; Well graded gravel (GW); greenish gray (GLEY1 5/1); subround; dry; metadiorite boulder pulverized	(135.0 - 157.0') Normal drilling	
136									
137									
138									
139	120			Topock - Alluvium Deposits	SW-SM		(137.0 - 139.0') Topock - Alluvium Deposits; Well graded sand with silt and gravel (SW-SM); reddish brown (5YR 5/3); fine grained to very coarse grained, angular to subangular; little granules to small pebbles, angular to subangular; little silt; coarser clasts composed of metadiorite; wet	(137.0 - 140.0') Near full recovery, core bag ruptured on drill platform. Logged from material collected from the drill platform.	
140									
140				Topock - Alluvium Deposits	GW		(139.0 - 140.0') Topock - Alluvium Deposits; Well graded gravel with sand (GW); reddish brown (5YR 5/3) to reddish brown / moderate brown (5YR 4/4); granules to very large pebbles,		

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 collection of samples from the temporary well; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-82-168, MW-82-198 installed in borehole

SOIL BORING LOG: PG&E-TOPOCK-C:\USERS\SMC\GRAND\DOCUMENTS\PG&E-TOPOCK\DRIFT BORING LOGS\GINT FILES\06_29_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 06/29/20 15:32

Date Started:	07/31/2019	Surface Elevation:	483.71 ft amsl	Boring No.: MW-82d	
Date Completed:	08/22/2019	Northing (NAD83):	2103048.25		
Drilling Co.:	Cascade	Easting (NAD83):	7615993.33	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	207 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart	Borehole Diameter:	4-12 inches	Location:	PG&E Topock, Topock, California
Driller Name:	Eddie Ramos	Depth to First Water:	28.5 ft bgs		
Drilling Asst:	J. Colon / F. Sandoval	Sampling Method:	4 inch x 10 ft. Core Barrel	Project Number:	RC000753.0051
Logger:	JL / PK / AP	Sampling Interval:	Continuous		
Editor:	Sean McGrane	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	120		MW-H-VAS-142-147 (< 0.17 U ppb) 8/10/2019 10:04	Topock - Alluvium Deposits	GW-GM		(140.0 - 145.0') Topock - Alluvium Deposits; Well graded gravel with silt and sand (GW-GM); reddish brown (5YR 5/3) to reddish brown / moderate brown (5YR 4/4); granules to very large pebbles, angular to subround; some fine to very coarse grained sand, angular to subround; little silt; trace small cobbles, subangular to subround; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet; weak cementation		
142							(145.0 - 147.0') Topock - Alluvium Deposits; Poorly graded gravel with silt and sand (GP-GM); reddish brown / moderate brown (5YR 4/4); granules to small pebbles, angular to subangular; little fine to very coarse grained sand, angular to subround; little silt; coarser clasts composed of metadiorite; wet; weak cementation		
143				Topock - Alluvium Deposits	GM		(147.0 - 149.0') Topock - Alluvium Deposits; Silty gravel with sand (GM); reddish brown / moderate brown (5YR 4/4); granules to very large pebbles, angular to subround; some fine to very coarse grained sand, subangular to subround; little silt; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet		
144							(149.0 - 154.0') Topock - Alluvium Deposits; Well graded gravel with silt and sand (SW-SM); reddish brown / moderate brown (5YR 4/4); granules to medium pebbles, angular to subround; and fine to very coarse grained sand, subangular to subround; little silt; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet		
145	120	No sieve samples collected		Topock - Alluvium Deposits	SW-SM				
146									(154.0 - 157.0') Topock - Alluvium Deposits; Well graded gravel with silt and sand (GW-GM); reddish brown (5YR 4/3); granules to very large pebbles, angular to subround; some fine to very coarse grained sand, angular to subangular; little silt; little clay; coarser clasts composed of metadiorite; trace coarser clast composed of quartz; wet
147				Topock - Alluvium Deposits	SM				(157.0 - 167.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); reddish brown (5YR 4/3); fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; little silt; wet
148									(157.0 - 167.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); reddish brown (5YR 4/3); fine grained to very coarse grained, angular to subangular; some granules to very large pebbles, angular to subangular; little silt; wet
149	108			Topock - Alluvium Deposits	SM			(157.0 - 167.0') Rough drilling last 18 inches of run.	
150									
151									
152									

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SOIL BORING LOG: PG&E TOPOCK C:\USERS\SMC\GRAND\DOCUMENTS\PG&E TOPOCK\DRIFT BORING LOGS\GINT FILES\06_29_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 06/29/20 15:32

Date Started:	07/31/2019	Surface Elevation:	483.71 ft amsl	Boring No.: MW-82d	
Date Completed:	08/22/2019	Northing (NAD83):	2103048.25		
Drilling Co.:	Cascade	Easting (NAD83):	7615993.33	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	207 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart	Borehole Diameter:	4-12 inches	Location:	PG&E Topock, Topock, California
Driller Name:	Eddie Ramos	Depth to First Water:	28.5 ft bgs		
Drilling Asst:	J. Colon / F. Sandoval	Sampling Method:	4 inch x 10 ft. Core Barrel	Project Number:	RC000753.0051
Logger:	JL / PK / AP	Sampling Interval:	Continuous		
Editor:	Sean McGrane	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	108			Topock - Alluvium Deposits	SM				
162									
163									
164									
165	No sieve samples collected			Topock - Alluvium Deposits	GW-GM		(167.0 - 171.0') Topock - Alluvium Deposits; Well graded gravel with silt and sand (GW-GM); reddish brown (5YR 4/3); granules to very large pebbles, angular to subround; some fine to very coarse grained sand, angular to subangular; little silt; trace small cobbles, subangular to subround; coarser clasts composed of metadiorite; trace coarser clast composed of conglomerate; wet; weak cementation; weak HCL reaction	(167.0 - 187.0') Smooth drilling	
166									
167									
168									
169									
170									
171									
172									
173									
174									
175	120			Topock - Alluvium Deposits	SM		(171.0 - 171.5') Topock - Alluvium Deposits; Well graded gravel with silt and sand (GW-GM); very dark grayish brown (2.5Y 3/2); granules to small pebbles, angular to subangular; little medium to very coarse grained sand, angular to subangular; little silt; coarser clasts composed of metadiorite; little coarser clast composed of conglomerate; wet; moderate cementation	(171.5 - 175.0') Lithology was relogged in the field.	
176									
177									
178									
179	120			Topock - Alluvium Deposits	SM		(175.0 - 175.5') Topock - Alluvium Deposits; Well graded gravel with sand (GW); black (2.5Y 2.5/1); granules to very large pebbles, angular to subround; some fine to very coarse grained sand, angular to subangular; coarser clasts composed of metadiorite; wet; possible wildfire scar	(175.5 - 177.0') Lithology was relogged in the field.	
180									

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SOIL BORING LOG: PG&E-TOPOCK_C:\USERS\MCGRANE\DOCUMENTS\PG&E-TOPOCK\DRIFT BORING LOGS\GINT FILES\06_29_20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 06/29/20 15:32

Date Started:	07/31/2019	Surface Elevation:	483.71 ft amsl	Boring No.: MW-82d	
Date Completed:	08/22/2019	Northing (NAD83):	2103048.25		
Drilling Co.:	Cascade	Easting (NAD83):	7615993.33	Client:	PG&E
Drilling Method:	Sonic Drilling	Total Depth:	207 ft bgs	Project:	Final GW Remedy Phase 1
Drill Rig Type:	Boart	Borehole Diameter:	4-12 inches	Location:	PG&E Topock, Topock, California
Driller Name:	Eddie Ramos	Depth to First Water:	28.5 ft bgs		
Drilling Asst:	J. Colon / F. Sandoval	Sampling Method:	4 inch x 10 ft. Core Barrel	Project Number:	RC000753.0051
Logger:	JL / PK / AP	Sampling Interval:	Continuous		
Editor:	Sean McGrane	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									
182									
183	120			Topock - Alluvium Deposits	SM				
184			MW-H-VAS-182-187 (< 0.17 U ppb) 8/13/2019 10:08						
185									
186									
187									
188							(187.0 - 197.0') Topock - Alluvium Deposits; Silty sand with gravel (SM); reddish brown (5YR 4/3); very fine grained to very coarse grained, angular to subround; little small to large pebbles, angular to subangular; little silt; coarser clasts composed of metadiorite; and coarser clast composed of conglomerate; moist to wet; strong cementation; weak HCL reaction	(187.0 - 197.0') Increase in bedrock fragments and fine grained material and a decrease in sands interpret in the field as contact with weathered bedrock. Lithology was relogged in the field and contact adjusted based on QC review. 187 to 194 ft bgs smooth drilling, 194 to 196 ft. bgs tight drilling reported by driller.	
189		No sieve samples collected							
190									
191									
192	120			Topock - Alluvium Deposits	SM				
193									
194			MW-H-VAS-192-197 (< 0.17 U ppb) 8/14/2019 10:37						
195									
196									
197									
198	120			Topock - Alluvium Deposits	GW		(197.0 - 198.0') Topock - Alluvium Deposits; Well graded gravel (GW); very dark greenish gray (GLE Y1 3/1); granules to very large pebbles, angular to subround; wet; iron oxide staining; logged from the drill rod shoe, coarser clasts metadiorite	(197.0') Cleanout of borehole returned a well graded gravel with no sand/ fines in shoe.	
199				Topock - Weathered Bedrock - conglomerate	SC		(198.0 - 203.0') Topock - Weathered Bedrock - conglomerate; Clayey sand with gravel (SC); reddish brown / moderate brown (5YR 4/4); fine grained to very coarse grained, angular to subangular; little granules to large pebbles, angular to subround; little clay; coarser clast composed of conglomerate; some coarser clasts composed of metadiorite; wet to moist; strong cementation		
200									

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Date Started: 07/31/2019	Surface Elevation: 483.71 ft amsl	Boring No.: MW-82d
Date Completed: 08/22/2019	Northing (NAD83): 2103048.25	
Drilling Co.: Cascade	Easting (NAD83): 7615993.33	Client: PG&E
Drilling Method: Sonic Drilling	Total Depth: 207 ft bgs	Project: Final GW Remedy Phase 1
Drill Rig Type: Boart	Borehole Diameter: 4-12 inches	Location: PG&E Topock, Topock, California
Driller Name: Eddie Ramos	Depth to First Water: 28.5 ft bgs	
Drilling Asst: J. Colon / F. Sandoval	Sampling Method: 4 inch x 10 ft. Core Barrel	Project Number: RC000753.0051
Logger: JL / PK / AP	Sampling Interval: Continuous	
Editor: Sean McGrane	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				Topock - Weathered Bedrock - conglomerate	SC				
202									
203	120	No sieve samples collected					(203.0 - 207.0') Topock - Competent Bedrock - conglomerate; reddish brown / moderate brown (5YR 4/4) with brown (7.5YR 4/2); coarser clasts composed of metadiorite; dry to moist; strong cementation; friable, pulverized by drilling process	(203.0 - 207.0') Rough drilling	(203.0 - 207.0') No water used
204				Topock - Competent Bedrock - conglomerate					
205									
206									
207									

End of Boring at 207.0 ft bgs.

Final 6/29/20



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 collection of samples from the temporary well; apparent partial recoveries can be the result of potential compaction of sediments in the core bag; wells MW-82-168, MW-82-198 installed in borehole

SOIL BORING LOG: PG&E-TOPOCK C:\USERS\SMCGRANE\DOCUMENTS\PG&E-TOPOCK\DRIFT BORING LOGS\GINT FILES\06.29.20\TOPOCK DATABASE FOR PLOG.GPJ TOPOCK DATA TEMPLATE FOR PLOG.GDT 06/29/20 15:32