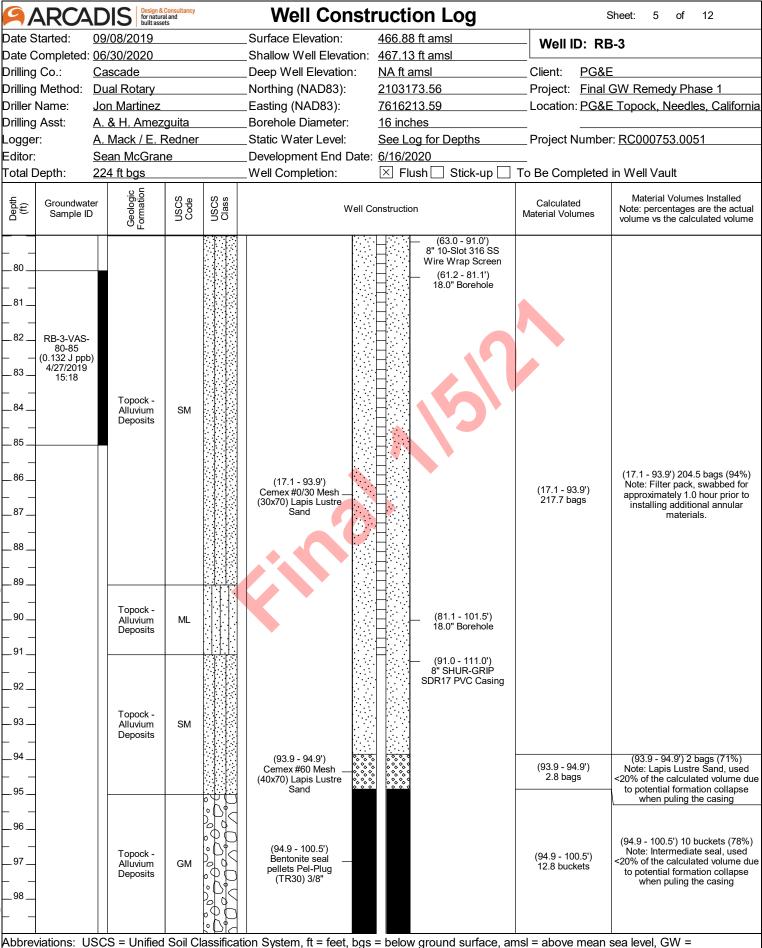
9/	ARC4	DIS Design & for natura built asset	Consultancy al and ts		Well Cons	struction Log	;	Sheet: 1 of 12
Date S	started:	09/08/2019	200		_Surface Elevation:	466.88 ft amsl	Well ID: RE	3.3
Date C	completed:	06/30/2020			_Shallow Well Elevation	n: <u>467.13 ft amsl</u>		
Drilling	Co.:	Cascade			_Deep Well Elevation:	NA ft amsl	Client: PG&E	Ξ
Drilling	Method:	Dual Rotary			_Northing (NAD83):	2103173.56	Project: Final	GW Remedy Phase 1
Driller I	Name:	Jon Martinez			_Easting (NAD83):	<u>7616213.59</u>	Location: PG&I	E Topock, Needles, California
Drilling	Asst:	A. & H. Amez	guita		_Borehole Diameter:	16 inches		
Logge	r:	A. Mack / E. F			_Static Water Level:	See Log for Depths	Project Numbe	r: RC000753.0051
Editor:		Sean McGran	ie		_Development End Da			
Total D	Depth:	224 ft bgs			_Well Completion:	⊠ Flush ☐ Stick-up ☐	To Be Completed	in Well Vault
Depth (ft)	Groundwat Sample II		USCS	USCS Class	Wel	I Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
0 1 2					(+1.0 - 2.5') Temporary surface completion (+0.3 - 25.0') 8" SHUR-GRIP SDR17 PVC Casing	(0.0 - 3.0') 18.0" Borehole		(+1.0 - 2.5') 21.5 bags Note: 30 inch diameter Quickrete and Kon-Crete cement pad dyed buff with 18 inch diameter lockable vault. Note: 12 inch diameter sonotube around well casing filled with native sand.
_ 3 _ 					(2.5 - 3.8')			
4		Topock - Fill	SP		(3.8 - 11.9') Portland Cement 3% Bentonite Type I, II and V with Hydrogel (9.5 - 10.5') Centralizer	(3.0 - 21.1') 18.0" Borehole	(3.8 - 11.9') 86.9 gallons	(3.8 - 11.9') 120 gallons (138%) Note: Grout seal, used >20% of the calculated volume due to potential grout migration and voids forming during drilling.
 13 14					(11.9 - 14.0') Bentonite seal pellets Pel-Plug (TR30) 3/8"		(11.9 - 14.0') 4.8 buckets	(11.9 - 14.0') 5 buckets (104%) Note: Seal between transition sand and grout seal.
	RB-3-VAS- 15-20 (<0.033 U	Topock - Fill	SP		(14.0 - 17.1') Cemex #60 Mesh — (40x70) Lapis Lustre Sand		(14.0 - 17.1') 8.6 bags	(14.0 - 17.1') 8 bags (93%) Note: Transition sand
17 18 	ppb) 4/26/2019 15:35		NR		(17.1 - 93.9') Cemex #0/30 Mesh (30x70) Lapis Lustre Sand		(17.1 - 93.9') 217.7 bags	(17.1 - 93.9') 204.5 bags (94%) Note: Filter pack, swabbed for approximately 1.0 hour prior to installing additional annular materials.
Δhhre	iations: II	SCS = Unified	Soil C	assificat	tion System ft = feet he	gs = below ground surface, ar	nsl = ahove mean	sea level GW =

groundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, J = estimated value, NR = no recovery; Notes: solid blue and hollow blue water table marks represent depth to water (ft. bgs.) measured pre-specific capacity for the shallow and deep screens respectively

9/	\RC4	DIS Design & Of for natura built asset	Consultancy l and cs		Well Consti	ruction Log	S	Sheet: 2 of 12
Date S	tarted:	09/08/2019			_Surface Elevation:	466.88 ft amsl	Well ID: RE	I-3
Date C	ompleted:	06/30/2020			_Shallow Well Elevation:	467.13 ft amsl		
Drilling	Co.:	Cascade			_Deep Well Elevation:	NA ft amsl	Client: PG&E	
Drilling	Method:	Dual Rotary			_Northing (NAD83):	2103173.56	Project: Final GW Remedy Phase 1	
Driller I		Jon Martinez			_Easting (NAD83):	7616213.59	Location: <u>PG&E</u>	Topock, Needles, California
Drilling	Asst:	A. & H. Amez	-		_Borehole Diameter:	16 inches		
Logge		A. Mack / E. F			_Static Water Level:	See Log for Depths	Project Number	:: RC000753.0051
Editor:		Sean McGran	e		_Development End Date:		_	
Total D	epth:	224 ft bgs		<u> </u>	_Well Completion:		To Be Completed	ın Well Vault
Depth (ft)	Groundwat Sample II		USCS	USCS Class		onstruction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
	Sample IE	Topock - Fill	SD NR SP	S o	(+0.3 - 25.0') 8" SHUR-GRIP SDR17 PVC Casing (25.0 - 53.0') 8" 10-Slot 316 SS Wire Wrap Screen (17.1 - 93.9') Cemex #0/30 Mesh (30x70) Lapis Lustre Sand	(3.0 - 21.1') 18.0" Borehole (21.1 - 41.3') 18.0" Borehole	(17.1 - 93.9') 217.7 bags	
36 37 38		Topock - Fill	SP					

9/-	ARC4	DIS Design & for natura built asse	Consultancy all and ts		Well Const	ruction Log	;	Sheet: 3 of 12
Date S	tarted:	09/08/2019			_Surface Elevation:	466.88 ft amsl	Well ID: RE	3-3
		06/30/2020			_Shallow Well Elevation:			
Drilling		Cascade			_Deep Well Elevation:	NA ft amsl	Client: PG&E	
_	Method:	Dual Rotary			_Northing (NAD83):	2103173.56	•	GW Remedy Phase 1
Driller I		Jon Martinez			_Easting (NAD83):	7616213.59	Location: <u>PG&</u>	E Topock, Needles, California
Drilling		A. & H. Amez	-		_Borehole Diameter:	16 inches		
Logge		A. Mack / E. F			_Static Water Level:	See Log for Depths	Project Numbe	r: RC000753.0051
Editor: Total D		Sean McGran 224 ft bgs	ie		_Development End Date _Well Completion:	∑ Flush Stick-up	— To Be Completed	in Well Vault
Depth (ft)	Groundwat Sample II		Code	USCS		construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
		Topock - Fill	SP		(25.0 - 53.0') —			
40 41 42 43 44		Topock - Fluvial Deposits	SW		Wire Wrap Screen	(21.1 - 41.3') 18.0" Borehole		
45			NR	X				
45 46 47		Topock - Fluvial Deposits	SW					
48 49 50		Topock - Fluvial Deposits	GW		(17.1 - 93.9') Cemex #0/30 Mesh (30x70) Lapis Lustre Sand	44.2 64.20	(17.1 - 93.9') 217.7 bags	(17.1 - 93.9') 204.5 bags (94%) Note: Filter pack, swabbed for approximately 1.0 hour prior to installing additional annular materials.
50 <u></u> 51		Topock - Fluvial Deposits	SP			(41.3 - 61.2') 18.0" Borehole		
52 53 54 55	RB-3-VAS- 50-55 (0.100 J ppb 4/27/2019 11:10)	NR			(53.0 - 63.0') 8" SHUR-GRIP SDR17 PVC Casing		
56 57		Topock - Fluvial Deposits	GW		(56.5 - 57.5')			
58		Topock - Fluvial Deposits	ML		Centralizer			

9/	ARC4	DIS Design & for natura built asset	Consultancy al and its		Well Const	ruction Log	Sheet: 4 of 12		
Date S		09/08/2019			_Surface Elevation:	466.88 ft amsl	Well ID: RB	i-3	
	•	06/30/2020			_Shallow Well Elevation:				
Drilling		Cascade			_Deep Well Elevation:	NA ft amsl	Client: <u>PG&E</u>		
_		Dual Rotary			_Northing (NAD83):	2103173.56	•	GW Remedy Phase 1	
Driller I		Jon Martinez			_Easting (NAD83):	7616213.59	Location: <u>PG&E</u>	Topock, Needles, California	
Drilling		A. & H. Amez	-		_Borehole Diameter:	16 inches		D0000750 0054	
Logge		A. Mack / E. F			_Static Water Level:	See Log for Depths	Project Number	:: RC000753.0051	
Editor: Total D	ditor: <u>Sean McGrane</u> otal Depth: <u>224 ft bgs</u>				_Development End Date: _Well Completion:		— To Be Completed	in Well Vault	
Depth (ft)	Groundwat Sample ID		USCS	USCS	Well C	Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume	
			ML			(53.0 - 63.0') 8" SHUR-GRIP			
60 61 62 63 64 65		Topock - Alluvium Deposits	ML			SDR17 PVC Casing (41.3 - 61.2') 18.0" Borehole (63.0 - 91.0') 8" 10-Slot 316 SS Wire Wrap Screen			
		Topock - Alluvium Deposits	GM						
666768697071727374757677		Topock - Alluvium Deposits	SM	<u>O</u>	(17.1 - 93.9') Cemex #0/30 Mesh — (30x70) Lapis Lustre Sand	(61.2 - 81.1') 18.0" Borehole	(17.1 - 93.9') 217.7 bags	(17.1 - 93.9') 204.5 bags (94%) Note: Filter pack, swabbed for approximately 1.0 hour prior to installing additional annular materials.	
 78 		Topock - Alluvium Deposits	ML						



9/-	ARC4	DIS Design of for nature built ass	& Consultancy ral and sets		Well Cons	tructio	n Log	;	Sheet: 6 of 12
	tarted:	09/08/2019			_Surface Elevation:	466.88		Well ID: RE	3-3
Date C Drilling	-	06/30/2020 Cascade			_Shallow Well Elevation _Deep Well Elevation:	NA ft an			=
_		Dual Rotary			_ Northing (NAD83):	210317			= GW Remedy Phase 1
Driller I		Jon Martinez			_Rorining (NAD83). _Easting (NAD83):	<u>761621</u>		•	E Topock, Needles, California
Drilling		A. & H. Amez			_ Borehole Diameter:	16 inche		Location. <u>r Oct</u>	_ Topock, Necales, California
Logge		A. Mack / E.	-		_Static Water Level:		g for Depths	Proiect Numbe	r: RC000753.0051
Editor:		Sean McGra			_Development End Date	-	•	· · · , - · · · · · · · · · · · ·	
Total D	epth:	224 ft bgs			Well Completion:	× Flus		To Be Completed	in Well Vault
Depth (ft)	Groundwat Sample II		USCS	USCS Class	Well	Construction		Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
100 101		Topock - Alluvium Deposits	GM		(94.9 - 100.5') Bentonite seal pellets Pel-Plug (TR30) 3/8" ∴		(91.0 - 111.0') 8" SHUR-GRIP SDR17 PVC Casing (81.1 - 101.5') 18.0" Borehole	(94.9 - 100.5') 12.8 buckets	(94.9 - 100.5') 10 buckets (78%) Note: Intermediate seal, used <20% of the calculated volume due to potential formation collapse when puling the casing
102									
103		Topock -	SM						
 104		Deposits							
104									
 105									
106				1919	(105.5 - 106.5')		(101.5 - 110.6')		
		Topock - Alluvium	GM	127	Centralizer		18.0" Borehole		
107		Deposits							
				12 P	9				
108		<u> </u>		SPIG					
		Topock - Alluvium	SM						
109		Deposits							(100.5 - 224.0') 285 bags (107%)
				600	(100.5 - 224.0') Cemex #60 Mesh			(100.5 - 224.0')	Note: Filter pack, swabbed for
110				1397	(40x70) Lapis Lustre			267.4 bags ´	approximately 3.5 hours prior to installing additional annular
_					Saliu				materials.
111				19,97		$H \cap L$	(111.0 - 193.9')		
		Topock -				$H \otimes H$	8" 8-Slot 316 SS Wire Wrap Screen		
112		Alluvium Deposits	GM	99		H	·		
113				Polo					
 114									
_'''-				197					
 115							(110.6 - 120.8') 16.0" Borehole		
						:: ::			
116									
						::			
117		Topock - Alluvium	SM						
		Deposits				·H··I			
118						H			
						·H···I			
l l		1 1	1	1. 1. 1.	1 · 1 · 1 · 1	1 1 1		i .	i e

9/	ARC4	DIS Design & for natura built asset	Consultancy al and ets		Well Const	ruction Log	S	Sheet: 7 of 12
Date S	started:	09/08/2019			_Surface Elevation:	466.88 ft amsl	Well ID: RB	3-3
	•	06/30/2020			_Shallow Well Elevation:			
Drilling		Cascade			_Deep Well Elevation:	NA ft amsl	Client: PG&E	
_		Dual Rotary			_Northing (NAD83):	2103173.56	Project: Final GW Remedy Phase 1	
Driller I		Jon Martinez			_Easting (NAD83):	7616213.59	Location: <u>PG&E</u>	Topock, Needles, California
Drilling		A. & H. Amez	-		_Borehole Diameter:	16 inches		D0000750 0054
Logge Editor:		A. Mack / E. F			_Static Water Level:	See Log for Depths	Project Number	r: RC000753.0051
Total D		Sean McGrar 224 ft bgs	ie		_Development End Date: _Well Completion:		— To Be Completed	in Well Vault
Total	осрит.				_ vvcii Compiction.	E Tidon Clorap	To Be completed	
Depth (ft)	Groundwat Sample IE		Code	USCS	Well C	Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
120	RB-3-VAS- 120-125 (<0.17 U ppt 4/28/2019 11:29	Topock - Alluvium Deposits Topock - Alluvium Deposits	SM		(100.5 - 224.0') Cemex #60 Mesh — (40x70) Lapis Lustre Sand	(111.0 - 193.9') 8" 8-Slot 316 SS Wire Wrap Screen (110.6 - 120.8') 16.0" Borehole	(100.5 - 224.0') 267.4 bags	(100.5 - 224.0') 285 bags (107%) Note: Filter pack, swabbed for approximately 3.5 hours prior to installing additional annular materials.

9/	ARC4	DIS Design & for natura built asse	Consultancy all and ts		Well Const	ruction Log	Sheet: 8 of 12		
Date S	tarted:	09/08/2019			_Surface Elevation:	466.88 ft amsl	Well ID: RB	1-3	
	•	06/30/2020			_Shallow Well Elevation:	467.13 ft amsl			
Drilling	Co.:	Cascade			_Deep Well Elevation:	NA ft amsl	Client: PG&E		
Drilling	Method:	Dual Rotary			_Northing (NAD83):	2103173.56	Project: <u>Final (</u>	GW Remedy Phase 1	
Driller I		Jon Martinez			_Easting (NAD83):	7616213.59	Location: <u>PG&E</u>	Topock, Needles, California	
Drilling	Asst:	A. & H. Amez	-		_Borehole Diameter:	16 inches			
Loggei		A. Mack / E. F			_Static Water Level:	See Log for Depths	Project Number	:: RC000753.0051	
Editor:		Sean McGran	ie		_Development End Date		 		
Total D	Depth:	224 ft bgs			_Well Completion:		To Be Completed	in Well Vault	
Depth (ft)	Groundwat Sample ID		USCS	USCS	Well C	Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume	
140		Topock - Alluvium Deposits	GM			(111.0 - 193.9') 8" 8-Slot 316 SS Wire Wrap Screen (120.8 - 140.5') 16.0" Borehole			
145 146 147 148 149		Topock - Alluvium Deposits	SM		(100.5 - 224.0') Cemex #60 Mesh		(100.5 - 224.0') 267.4 bags	(100.5 - 224.0') 285 bags (107%) Note: Filter pack, swabbed for approximately 3.5 hours prior to	
150 151 	RB-3-VAS-	Topock - Alluvium Deposits	GM		(40x70) Lapis Lustre	(140.5 - 161.6') 16.0" Borehole	267.4 Dags	installing additional annular materials.	
153 154 155	150-155 (<0.17 U ppb 4/29/2019 10:13	Topock - Alluvium Deposits	SM						
156 156 157 158		Topock - Weathered Bedrock - conglomerate	ML						

AR	CAE	DIS Design & C for natural built asset	onsultancy and		Well Cons	truction Log	S	heet: 9 of 12	
Date Started	d: <u>0</u> 9	9/08/2019			_Surface Elevation:	466.88 ft amsl	Well ID: RB	-3	
Date Compl					_Shallow Well Elevation				
Drilling Co.:		ascade			_Deep Well Elevation:	NA ft amsl	_ Client: PG&E		
Drilling Meth		ual Rotary			_Northing (NAD83):	2103173.56	Project: Final GW Remedy Phase 1		
Driller Name		on Martinez			_Easting (NAD83):	7616213.59	Location: <u>PG&E</u>	Topock, Needles, California	
Drilling Asst		. & H. Amezo			_Borehole Diameter:	16 inches		D0000750 0054	
Logger: Editor:		<u>. Mack / E. R</u> ean McGran			_Static Water Level: _Development End Dat	See Log for Depths	_ Project Number	: RC000753.0051	
Total Depth		ean wcgran 24 ft bgs	5		_Development End Dat _Well Completion:		— To Be Completed	in Well Vault	
#a (⊋) Grou	undwater mple ID	Geologic	USCS	USCS Class	·	Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume	
		Topock - Weathered Bedrock - conglomerate	ML		(100.5 - 224.0') Cemex #60 Mesh (40x70) Lapis Lustre Sand	(111.0 - 193.9') 8" 8-Slot 316 SS Wire Wrap Screen (140.5 - 161.6') 16.0" Borehole (161.6 - 181.8') 16.0" Borehole	(100.5 - 224.0') 267.4 bags	(100.5 - 224.0') 285 bags (107%) Note: Filter pack, swabbed for approximately 3.5 hours prior to installing additional annular materials.	

9/	ARC4	DIS Design & for natura built asset	Consultancy al and ets		Well Con	struction Log	:	Sheet: 10 of 12		
Date S	started:	09/08/2019			_Surface Elevation:	466.88 ft amsl	Well ID: RE	3-3		
	•	06/30/2020			_Shallow Well Elevation					
Drilling		Cascade			_Deep Well Elevation:	·	Client: PG&I			
_	Method:	Dual Rotary			_Northing (NAD83):	2103173.56		Project: Final GW Remedy Phase 1		
Driller I		Jon Martinez			_Easting (NAD83):	<u>7616213.59</u>	Location: <u>PG&I</u>	Location: PG&E Topock, Needles, California		
Drilling		A. & H. Amez	-		_Borehole Diameter:	16 inches				
Logge					_Static Water Level:	See Log for Depths	Project Numbe	r: RC000753.0051		
Editor:		Sean McGrar	ne		_Development End Da					
Total D	Depth:	224 ft bgs	1		_Well Completion:	∑ Flush ☐ Stick-∟	ıp 🗌 To Be Completed	in Well Vault		
Depth (ft)	Groundwat Sample II		OSCS Code	USCS Class	We	ell Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume		
	RB-3-VAS- 180-185 (<0.033 U ppb) 4/29/2019 15:38	Topock - Weathered Bedrock - conglomerate Topock - Weathered Bedrock - conglomerate	SM		(100.5 - 224.0') Cemex #60 Mesh (40x70) Lapis Lustre Sand (193.9 - 194.4') PVC plug	(111.0 - 193. 8" 8-Slot 316 Wire Wrap Sc (161.6 - 181. 16.0" Boreho	(100.5 - 224.0') 267.4 bags	(100.5 - 224.0') 285 bags (107%) Note: Filter pack, swabbed for approximately 3.5 hours prior to installing additional annular materials. Note: Installed to repair well.		
195 196 197 198		Topock - Weathered Bedrock - conglomerate	ML		(194.4 - 216.1') 8" 8-Slot 316 SS Wire Wrap Screen filled with Cal-Silica 1/4"-3/8" pea gravel		(194.4 - 222.0') 19.3 bags	(194.4 - 222.0') 17 bags (88%) Note: Pea gravel installed to backfill sump and screen above damaged and twisted section at 198 to 205 ft bgs.		
						4				

9/-	ARC4	DIS	Design & Consultant for natural and built assets	у	Well Cons	truction Log	;	Sheet: 11 of 12
Date S		09/08/20	19		_Surface Elevation:	466.88 ft amsl	Well ID: RE	2-3
Date C	ompleted:	06/30/20	20		_Shallow Well Elevation	n: 467.13 ft amsl	_ well ib. Ki)-J
Drilling	Co.:	Cascade	;		_Deep Well Elevation:	NA ft amsl	_ Client: PG&E	<u> </u>
Drilling	Method:	Dual Rot	ary		_Northing (NAD83):	2103173.56	_ Project: <u>Final</u>	GW Remedy Phase 1
Driller I		Jon Mart	inez		_Easting (NAD83):	7616213.59	_ Location: <u>PG&F</u>	<u> Topock, Needles, California</u>
Drilling	Asst:	A. & H. A	<u>Amezguita</u>		_Borehole Diameter:	16 inches		
Loggei				er	_Static Water Level:	See Log for Depths	_ Project Numbe	r: RC000753.0051
Editor:		Sean McGrane		Development End Date		<u> </u>		
Total D	epth:	224 ft bg		1	_Well Completion:	✓ Flush	Γο Be Completed	in Well Vault
Depth (ft)	Groundwat Sample ID		Formation USCS	USCS	Well	Construction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
	RB-3-VAS- 205-210 (<0.17 U ppt 4/30/2019 15:15	Topo Weath Bedro conglon	ock - nered ock - nerate ML		(100.5 - 224.0') Cemex #60 Mesh (40x70) Lapis Lustre Sand (194.4 - 216.1') 8" 8-Slot 316 SS Wire Wrap Screen filled with Cal-Silica 1/4"-3/8" pea gravel	(181.8 - 201.2') 16.0" Borehole (201.2 - 220.5') 16.0" Borehole	(100.5 - 224.0') 267.4 bags (194.4 - 222.0') 19.3 bags	(100.5 - 224.0') 285 bags (107%) Note: Filter pack, swabbed for approximately 3.5 hours prior to installing additional annular materials. (194.4 - 222.0') 17 bags (88%) Note: Pea gravel installed to backfill sump and screen above damaged and twisted section at 198 to 205 ft bgs.
216 217 		Topo Weath	nerate		(216.1 - 222.0') 8" SHUR-GRIP SDR17 PVC Sump and End Cap filled Cal-Silica 1/4"-3/8" pea gravel (218.0 - 219.0')			
		Bedro	ock - I		Cambraliana .			

9/	ARCA	DIS Design & Control for natural built asset	Consultancy I and ts		Well Consti	ruction Log	S	Sheet: 12 of 12	
	tarted:	09/08/2019			_Surface Elevation:	466.88 ft amsl	Well ID: RB	3-3	
	-	06/30/2020			_Shallow Well Elevation:				
Drilling		Cascade			_Deep Well Elevation:	NA ft amsl	Client: PG&E		
_		Dual Rotary			_Northing (NAD83):	2103173.56		GW Remedy Phase 1	
Driller I		Jon Martinez			_Easting (NAD83):	7616213.59	Location: <u>PG&E</u>	Topock, Needles, California	
Drilling		A. & H. Amezo	-		_Borehole Diameter:	16 inches	<u> </u>		
Loggei		A. Mack / E. F			_Static Water Level:	See Log for Depths	Project Number	: RC000753.0051	
Editor: Total D		Sean McGran 224 ft bgs	<u>e</u>		_Development End Date: _Well Completion:		 To Be Completed in Well Vault		
Depth (ft)	Groundwat Sample ID		USCS	USCS Class	Well Co	onstruction	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume	
		conglomerate				(201.2 - 220.5')	(194.4 - 216.1')	(194.4 - 222.0') 17 bags (88%) Note: Pea gravel installed to	
		Topock - Weathered	ML		(216.1 - 222.0') 8" SHUR-GRIP		19.3 bags	backfill sump and screen aboved amaged and twisted section at 198 to 205 ft bgs.	
		Bedrock - conglomerate			SDR17 PVC Sump — and End Cap filled Cal-Silica 1/4"-3/8" pea gravel	(220.5 - 224.0') 16.0" Borehole	(100.5 - 224.0') 267.4 bags	(100.5 - 224.0') 285 bags (107%) Note: Filter pack, swabbed for approximately 3.5 hours prior toi nstalling additional annular	
223 								materials.	
-//4				<u> </u>	End of Boring at	· · · · · · · · · · · · · · · · · · ·			
					224.0 ft bgs.				
228									
229_									
_230									
_231									
_									
_232									
_233									
_234									
_235									
_236									
238									
<u> </u>		000 11 :5 1		161 4					

9/	ARCA	DIS	Des for buil	sign & Consultant natural and lt assets	су	Drilling Log	Sheet:			1 of 12
	Started:	08/24			Sı	urface Elevation:	466.3 ft amsl	Borin	g No.: RE	3-3
	Completed:			19		orthing (NAD83):	2103172.5			
Drilling		Casc				asting (NAD83):	7616213.0	_ Client:	PG&E	
_	Method:	<u>Dual</u>		-		otal Depth:	224 ft bgs	_ Project:		medy Phase 1
	g Type:			DR-241		onductor Casing Diameter:		_ Location:	PG&E Topod	k, Needles, California
Driller I		Jon N				rill Casing Diameter:	16 inches			
Drilling				<u>mezguita</u>		rill Bit:	15.5 inch & 17.5 Tricone Project Number: RC000753			0753.0051
	usher:	Scott				epth to First Water:	11.35 ft bgs			
Rig Ge	eologist:	A. Ma	ack /	E. Redr	ner C	onverted to Well:	× Yes No			T
Depth (ft)	Drilling Rui and Averag Penetration R	e lõ	SCS ode	USCS Class	Casing Diameter	Description (See Pilot boring log for full geologic descriptions)	Drillir	ng Notes		Drilling Fluid
_ 1 _ _ 1 _ _ 2 _ _ 2 _ _ 3 _	(0.0 - 3.0) 968.21 mins/	ft			(0.0 - 3.0') 18.0" Steel Casing	(0.0 - 8.0') Topock - Fill; Poorly graded sand (SP)	(0.0 - 10.0') Drilled with wat			(0.0 - 21.1') 3589.76 gallons of water used; 91.2 gallons of water recovered; 3498.56 gallons of water lost
		_	SP			(8.0 - 15.0') No recovery (NR)	(3.0') Drilling stopped due t	o a clogged di	scharge hose.	
- 9 10 11 12 13 14	(3.0 - 21.1) 3.30 mins/ft		NR		(3.0 - 21.1') 18.0" Steel Casing		(10.0') Observed trace amo Lapis Luster Sand in drill cu (10.0 - 21.1') Drilled with way	uttings (see ph		
15 16 17			 SP			(15.0 - 18.0') Topock - Fill; Poorly graded sand (SP)	y -			
18 19 20			NR			(18.0 - 20.0') No recovery (NR)				

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater Remarks: NR = no recovery, blue water table symbol represents depth to water measured during the first VAS interval for RB-3 Pilot

9/	ARCA				су	Drilling Log	Sheet: 2 of 12			
Date S	Started:	08/2	4/201	9	Sı	urface Elevation:	466.3 ft amsl	Boring No.: RE	3-3	
	Completed:	09/0	7/201	9	N	orthing (NAD83):	2103172.5			
Drilling	•	Caso	cade			asting (NAD83):	7616213.0	Client: PG&E		
_	g Method:		Rota	-		otal Depth:	224 ft bgs	-	medy Phase 1	
	ig Type:			DR-241		onductor Casing Diameter:		Location: PG&E Topod	ck, Needles, California	
	Name:		<u>Martir</u>			rill Casing Diameter:	16 inches	· 		
Drilling	-			<u>nezguit</u>		rill Bit:	15.5 inch & 17.5 Tricone	Project Number: RC00	00753.0051	
	Pusher:		t Johr			epth to First Water: onverted to Well:	11.35 ft bgs	-		
Rig Ge	eologist:	A. IVI	ack /	E. Redi	ner C	onverted to vveii:	× Yes No			
Depth (ft)	Drilling Ru and Averag Penetration F	n le Rate	JSCS Code	USCS Class	Casing Diameter	Description (See Pilot boring log for full geologic descriptions)	Drilling	g Notes	Drilling Fluid	
	(3.0 - 21.1) 3.30 mins/ft				(3.0 - 21.1') 18.0" Steel Casing	(20.0 - 33.0') Topock - Fill; Poorly graded sand (SP)	(20.0') Observed trace amou Lapis Luster Sand in drill cut	ints of Cemex #3 MESH (8x10) tings (see photo log).		
21	(21.1 - 41.3) 1.93 mins/ft		SP NR			(33.0 - 35.0') No recovery (NR) (35.0 - 39.5') Topock - Fill; Poorly graded sand (SP)	(30.0') Drilled with water.	ier.	(21.1 - 61.2') 6417.18 gallons of water used; 3705.6 gallons of water recovered; 2711.58 gallons of water lost	
37			SP							
40	1		SW			(39.5 - 44.0') Topock - Fluvial	(39.6 - 59.2') Drill rods chatte	ering.	1	
	viations: 119	202	- I Inif	iod Soil	Classificati	ion System ft - foot has -	helow ground surface, ams	cl = above mean sea lovo	J GW = groundwater	

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwate Remarks: NR = no recovery, blue water table symbol represents depth to water measured during the first VAS interval for RB-3 Pilot

ARCA				Drilling Log			Sheet: 3 of 12		
Date Started:			S	urface Elevation:	466.3 ft amsl	Borin	g No.: RB	-3	
Date Completed:				orthing (NAD83):	2103172.5			<u> </u>	
Drilling Co.:	Cascad			asting (NAD83):	7616213.0	Client:	PG&E		
Drilling Method:	Dual Ro	•		otal Depth:	224 ft bgs	Project:	Final GW Ren	•	
Drill Rig Type:		st DR-24		onductor Casing Diameter:		Location:	PG&E Topocl	k, Needles, California	
Driller Name:	Jon Ma			rill Casing Diameter:	16 inches	D!4 N		2752.0054	
Drilling Asst:		Amezguit		rill Bit:	15.5 inch & 17.5 Tricone	Project N	umber: RC000	0/53.0051	
Tool-Pusher: Rig Geologist:	Scott Jo	<u>/ E. Red</u>		epth to First Water: onverted to Well:	11.35 ft bgs				
Tig Ocologist.	A. Maci	T. INCU	T 0	1	Tes INO				
Depth Drilling Ru			Casing	Description	Drilling	Notes		Drilling Fluid	
(ft) Penetration F	Rate Cod	e Class	Diameter	(See Pilot boring log for full geologic descriptions)	Dilling	Notes		Drilling Fluid	
		*****	(0.4.4.44.01)	Deposits; Well graded sand (SW		nts of Cemex	(#3 MESH (8x10)		
(21.1 - 41.3)			(21.1 - 41.3') 18.0" Steel		Lapis Luster Sand in drill cutt	tings (see ph	oto log).		
41 ^{1.93 mins/it}		******	Casing						
			>		(41.3 - 61.2') Drill rods chatte	ering.			
42	SW								
 		******	>						
43		*****	>						
 			>						
44			}	(44.0 - 45.0') No recovery (NR)					
- -	NR	\perp							
45		- +,,,,,,,,		(45.0 - 47.0') Topock - Fluvial					
₄₆				Deposits; Well graded sand (SW)				
46	SW		>						
47		******							
-47-				(47.0 - 50.0') Topock - Fluvial Deposits; Well graded gravel with					
48				sand (GW)					
-40-		•							
49	GW								
	0.0		(41.3 - 61.2')	(50.0 - 51.0') Topock - Fluvial Deposits; Poorly graded sand (SF	(50.0') Observed trace amou				
- (41.3 - 61.2) - 3.34 mins/ft			`18.0" Steel		Laplo Edotor Garia III ariii Gati	ungo (ooo pii	0.0 109).		
			J Casmig	(51.0 - 55.0') No recovery (NR)					
52		$ \rangle /$							
53	NF.								
	1	$ \ \ $							
54									
		/ \							
55		_ \	V		_				
				(55.0 - 57.0') Topock - Fluvial Deposits; Well graded gravel with	1				
56	GW		1	sand (GW)					
			•						
57			1	(57.0 50.5) T					
<u> </u>				(57.0 - 59.5') Topock - Fluvial Deposits; Silt with sand (ML)					
58									
<u> </u>	ML								
59									
<u> </u>	L .		<u> </u>	(FO F OF ON Target Allow)	_				
60	ML		01:	(59.5 - 65.0') Topock - Alluvium	holow ground ourfood, amo	Ib		014/	

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater Remarks: NR = no recovery, blue water table symbol represents depth to water measured during the first VAS interval for RB-3 Pilot

9/-	ARCA					Drilling Log			Sheet: 4 of 12						
Date S						Surface Elev			6.3 ft a		sl	Во	rin	g No.: RE	B-3
	completed:			9		Northing (NA	•		103172						
Drilling			scade			Easting (NAI			316213			_ Client:		PG&E	
	Method: g Type:		<u>al Rota</u> remost	•	1110	Total Depth:	Casing Diameter:		24 ft bg			_ Projec			medy Phase 1 k, Needles, California
Driller I			n Martir		<u>+⊓∪</u>	Drill Casing I	-		inche:			_ Locali	OH.	FG&E TOPOL	k, Needles, California
Drilling			& H. Ar		ita	Drill Bit:	Diameter.				₹ 17.5 Tricone	– e Proied	t N	umber: RC00	0753.0051
Tool-P			ott Johi	•		Depth to Fire	st Water:		1.35 ft k			,			
Rig Ge	eologist:	<u>A.</u>	Mack /	E. Re	dner	Converted to			Yes	Ŭ	No				
	Drilling Du	_					Description	Ī							
Depth (ft)	Drilling Rui and Averag Penetration R	е	USCS Code	USCS Class		er (See Pi	ilot boring log for logic descriptions)				Drillin	g Notes			Drilling Fluid
	(41.3 - 61.2) 3.34 mins/ft				(41.3 - 61 18.0" Ste	· Z) / N / I ` \	andy silt with gravel				served trace amo er Sand in drill cu			x#3 MESH (8x10) oto log).	
61	3.34 IIIIIS/II				Casing				(2.1.2						
									(61.2 -	81.2	2') Drilled with wa	ater.			(61.2 - 101.1') 24063.76 gallons of water used;
62															25318.84 gallons of water recovered; 1255.08
			ML												gallons of water gained
63															
64															
 65															
05			014	177	7	(65.0 - 66.0)) Topock - Alluvium Ity gravel with sand								
66			GM			(GM)									
						(66.0 - 77.0) Deposits; Si	Topock - Alluvium Ity sand with gravel	7		1					
67						(SM)									
68															
69					3										
70					∵ (61.2 - 81	1)			(70.0')	Obs	served trace amo	unts of Ce	mex	#3 MESH (8x10)	_
	(61.2 - 81.1) 8.77 mins/ft				18.0" Ste	el			Lapis L	.ust	er Sand in drill cu	ıttings (se	e ph	oto log).	
71					Casing										
72			SM												
73															
74															
75															
76															
					심										
77						(77.0 - 79.0') Topock - Alluvium	\dashv							
<u> </u>						Deposits; Sa (ML)	andy silt with gravel								
78			ML												
70															
79			C1 :) Topock - Alluvium Ity sand with gravel	\exists							
80			SM			(SM)	Jana willi gravel								
	iations: US	SCS	S = Unif	ied So	il Classific	ation System	ft = feet_bas =	belo	ow aro	und	d surface am	sl = abo	ve i	mean sea leve	I. GW = groundwater

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwage Remarks: NR = no recovery, blue water table symbol represents depth to water measured during the first VAS interval for RB-3 Pilot

A				i <mark>gn & Consultan</mark> natural and t assets	су	Drilling Log	og			Sheet: 5 of 12		
Date Star					S	Surface Elevation:	466.3 ft	amsl	Borin	g No.: RB	-3	
Date Cor	•			9		lorthing (NAD83):	210317					
Drilling C			scade			Easting (NAD83):	<u>761621</u>		Client:	PG&E		
Drilling M			al Rota	-		otal Depth:	224 ft b	-	Project:	Final GW Rer	-	
Drill Rig 1 Driller Na			<u>remost</u> n Martir	DR-241		Conductor Casing Diameter: Orill Casing Diameter:	16 inche		Location	PG&E TOPOC	k, Needles, California	
Drilling A				nezguit:		Orill Bit:		ch & 17.5 Tricone	Project N	umber RC000	0753 0051	
Tool-Pus			ott Johr	-		Depth to First Water:	11.35 ft			14000	0100.0001	
Rig Geol				E. Redr		Converted to Well:	× Yes	No				
	Drilling Dur					Description						
Debuil	Drilling Rur and Average enetration R	е	USCS Code	USCS Class	Casing Diameter	(See Pilot boring log for		Drilling	Notes		Drilling Fluid	
` / Pe	enetration R	ale				full geologic descriptions)	1(22.20			//		
(6	61.2 - 81.1)				(61.2 - 81.1 18.0" Steel		(80.0') Lapis) Observed trace amou Luster Sand in drill cutt	nts of Ceme tings (see ph	c#3 MESH (8x10) oto log).		
818	3.77 mins/ft				Casing							
							(81.2	- 101.1') Drilled with wa	ater.			
82												
83												
84												
			SM									
85												
 86												
87												
88												
89						(89.0 - 91.0') Topock - Alluvium	_					
<u> </u>						Deposits; Sandy silt with gravel						
90			ML		(04.4.404.5	(ML)	(90.0')) Observed trace amou	nts of Ceme	(#3 MESH (8x10)		
	31.1 - 101.5) 3.91 mins/ft				(81.1 - 101.5 18.0" Steel			Luster Sand in drill cut				
91					Casing	(91.0 - 95.0') Topock - Alluvium	-					
						Deposits; Silty sand with gravel (SM)						
92												
93												
93			SM									
94												
95												
						(95.0 - 101.5') Topock - Alluvium Deposits; Silty gravel with sand						
96						(GM)						
<u> </u>												
97												
<u> </u>			GM									
98												
 												
99												
100												
	tional IIC		1 1 :£	: C-:	Classifies	tion System ft - feet has -	holovi ar	aund aurface ama	l = abayra	maan aaa layal	C)M = ==================================	

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater Remarks: NR = no recovery, blue water table symbol represents depth to water measured during the first VAS interval for RB-3 Pilot

9/	ARCA	DI	S Designation for n built	gn <mark>& Consultan</mark> atural and assets	су	Drilling Log						Sheet:	6 of 12
Date S			24/201		Sı	urface Elevation:	466	3.3 ft a	ımsl		Borin	g No.: RI	3-3
	completed:	<u>09/</u>	07/201	9		orthing (NAD83):		3172					
Drilling			scade			asting (NAD83):		6213			Client:	PG&E	
_	Method:		al Rota	-		otal Depth:		ft bg			Project:		emedy Phase 1
	g Type:		emost			onductor Casing Diameter:					Location:	PG&E Topo	ck, Needles, California
Driller I Drilling			<u>Martin</u>			rill Casing Diameter: rill Bit:		inches		2000	Droiget N	umber: RC00	00752 0051
Tool-P			<u>& H. An</u> ott Johr	_		epth to First Water:		35 ft b		<u>one</u>	Projectiv	umber. <u>KCot</u>	00755.0051
	eologist:		Mack /			onverted to Well:		Yes	No				
						Description	T						
Depth	Drilling Rui and Averag	е	USCS Code	USCS Class	Casing Diameter	(See Pilot boring log for				Drilling	Notes		Drilling Fluid
(ft)	Penetration F	Rate	Code	Class	Diameter	full geologic descriptions)							
				T. T.	(81.1 - 101.5')				Observed trace				
101	(81.1 - 101.5 3.91 mins/ft		GM		` 18.0" Steel ²			(0,7,10) [Lapio Lactor Gar		iii outungo (oco prioto logy.	
				, J.P.	Casing								
102						(101.5 - 105.0') Topock - Alluviun Deposits; Silty sand with gravel	ו [(101.5 -	116.6') Drilled	with wa	ater.		(101.5 - 110.6') 773.24 gallons of water used;
					ł	(SM)							1258.92 gallons of water recovered; 485.68 gallons
103													of water gained
			SM										
104													
105						(105.0 - 108.0') Topock - Alluviun	$\exists 1$						
					,,_,_	Deposits; Silty gravel with sand	'						
106	(101.5 - 110.6 3.92 mins/ft				(101.5 - 110.6') 18.0"	(GM)							
	0.02 111113/10		GM		Steel Casing								
107													
108						(108.0 - 109.0') Topock - Alluviun	ì						
			SM			Deposits; Silty sand with gravel (SM)							
109				ڟڸٳ		(109.0 - 115.0') Topock - Alluviun	1						
110						Deposits; Silty gravel with sand (GM)							
110				ФФ.					Observed trace				
111								stopped		na in ai iation c	riii cuttings (ollapse arou	see photo log), ind borehole and	(110.6 - 120.8') 6010
' ' ' '				٩٥				under ri (110.6 -	g. · 120.8') Drilled	with wa	ater.		gallons of water used; 1802 gallons of water
112			GM										recovered; 4208 gallons of water lost
			GIVI	٩٥									
_113													
114													
				٠٩٥									
115	(110 6 120 6	,		3 1 2	(110.6 -	(445.0. 405.0!) Tanada Allanii							
	(110.6 - 120.8 2.43 mins/ft				120.8') 16.0" Steel Casing	(115.0 - 135.0') Topock - Alluviun Deposits; Silty sand with gravel	וו						
116						(SM)							
								(4.40.0	404 0l\ D.:!I d	:41	_4		(440.0. 404.01) 0040
117								- ט.טוו)	· 124.8') Drilled	with Wa	atti.		(116.6 - 124.8') 6010 gallons of water used;
-			SM										1802 gallons of water recovered; 4208 gallons of
118													water lost
 													
119													
120 Abbre\	/iations: U\$	SCS	= Unifi	ed Soil	Classificati	on System, ft = feet, bgs =	belo\	w gro	und surface,	amsl	= above r	mean sea leve	el, GW = groundwater

Remarks: NR = no recovery, blue water table symbol represents depth to water measured during the first VAS interval for RB-3 Pilot

9/	PARCADIS Obesign & Consultancy for natural and built assets Date Started: 08/24/2019			су	Drilling Log			Sheet: 7 of 12			
Date S	Started:	08/2	24/201	9	S	urface Elevation:	466.3 ft amsl	Borin	g No.:	RB-	3
	Completed:	09/0	07/201	9	N	orthing (NAD83):	2103172.5	. ———			<u> </u>
Drilling		Cas	scade			asting (NAD83):	7616213.0	Client:	PG&E		
_	Method:		al Rota	-		otal Depth:	224 ft bgs	Project:			edy Phase 1
	g Type:			DR-241		onductor Casing Diameter:		Location:	PG&E To	pock.	<u>, Needles, California</u>
Driller I			Martir			rill Casing Diameter:	16 inches				
Drilling				<u>nezguita</u>		rill Bit:	15.5 inch & 17.5 Tricone	Project N	umber: RC	2000	753.0051
	usher:		ott John			epth to First Water:	11.35 ft bgs	•			
Rig Ge	eologist:	A. I	viack /	E. Redr	ier C	onverted to Well:	Yes No				
Depth (ft)	Drilling Rui and Averag Penetration R	е	USCS Code	USCS Class	Casing Diameter	Description (See Pilot boring log for full geologic descriptions)	Drilling				Drilling Fluid
	(110.6 - 120.8 2.43 mins/ft						(120.0') Observed trace amo (8x10) Lapis Luster Sand in c			1).	
121						_	(120.8 - 140.5') Drilled with w	vater.			(120.8 - 201.2') 16966
 122										r	gallons of water used; 8868.8 gallons of water ecovered; 8097.2 gallons of water lost
 _123											
 124											
 125							(124.8 - 144.8') Drilled with w	vater.			(124.8 - 204.8') 17466 gallons of water used;
400										1	12871.6 gallons of water ecovered; 4594.4 gallons
126											of water lost
 127											
121											
128			SM								
129											
130	(120.8 - 140.5	5)			(120.8 - 140.5') 16.0"		(130.0') Observed trace amo				
 _131	2.49 mins/ft				Steel Casing		(8x10) Lapis Luster Sand in c	arılı cullings (see prioto log)).	
							(131.0') Drill rods chattering.				
132											
133											
 134											
135						(135.0 - 144.5') Topock - Alluviun					
-						Deposits; Silty gravel with sand (GM)	`				
136						(Civi)					
-				12 P. F.							
137											
 138			GM								
00											
139											
140				R HTG	<u> </u>				_		

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater Remarks: NR = no recovery, blue water table symbol represents depth to water measured during the first VAS interval for RB-3 Pilot

ARC		S Desi	ign & Consultanc natural and t assets	у	Drilling Log						She	et:	8 of 12
Date Started:	08	/24/201	9	Sı	ırface Elevation:	46	66.3 ft a	amsl		Bori	ng No.:	RR	_3
Date Complete	d: <u>09</u>	/07/201	9	No	orthing (NAD83):	<u>21</u>	03172	2.5			ig 110	IVD	<u></u>
Drilling Co.:	<u>Ca</u>	scade		Ea	asting (NAD83):	76	16213	3.0		_ Client:	PG&E		
Drilling Method	: <u>Du</u>	al Rota	ry	To	otal Depth:	22	24 ft bg	ıs		_ Project:	Final GV	V Rer	nedy Phase 1
Drill Rig Type:	<u>Fo</u>	remost	DR-24H	<u>ID</u> Co	onductor Casing Diameter:	<u> 18</u>	inche:	s		_ Location	: <u>PG&E T</u>	opocl	k, Needles, California
Driller Name:	<u>Jo</u>	n Martir	nez	Dr	ill Casing Diameter:	<u>16</u>	inche	s		_			
Drilling Asst:	<u>A.</u>	<u>& H. Ar</u>	nezguita	aDr	ill Bit:	<u>15</u>	5.5 incl	h & 1	7.5 Tricone	Project I	Number: <u>F</u>	RC000	0753.0051
Tool-Pusher:	<u>Sc</u>	ott Johr	nson	De	epth to First Water:	<u>11</u>	.35 ft b	bgs		_			
Rig Geologist:	<u>A.</u>	Mack /	E. Redn	ner Co	onverted to Well:	×	Yes		10				
Donth Drilling	Run				Description								
Depth and Ave	erage	USCS Code	USCS Class	Casing Diameter	(See Pilot boring log for				Drillin	g Notes			Drilling Fluid
					full geologic descriptions)		(4.40.01)	\ Ohac	wad trace on	aunta of Com	AV #2 MECH		
							(8x10) ĺ	Ĺapis	erved trace am Luster Sand in	drill cuttings			
141	-						(140.5	- 161.0	6') Drilled with	water.			
	-												
_142	-		PoloN										
	-	GM	X.P.										
_143	-												
	-												
_144	-												
	-		100										
_145	-				(144.5 - 149.0') Topock - Alluviur Deposits; Silty sand with gravel	ı	(1/4/8)	- 164	8') Drilled with	water			
	-				(SM)		(141.0	104.	5) Billied Willi	water.			
146	-												
	-												
147	-	SM				ľ							
	-												
148	-												
	-												
149	-												
	-				(149.0 - 152.0') Topock - Alluviur Deposits; Silty gravel with sand	ı							
	-			(4.40.5	(GM)								
(140.5 - 1 1.52 mir		014	P. P.	(140.5 - 161.6') 16.0"					erved trace am Luster Sand in				
151	15/10	GM		Steel Casing			(0,10)	Lapis	Luster Gariu III	unii cullings	(see prioto it	og).	
	-		100										
	-		64,4										
132	-				(152.0 - 155.0') Topock - Alluviur Deposits; Silty sand with gravel	ı							
	-				(SM)								
_133	-												
154	-	SM											
154	-												
455	-												
155					(155.0 - 191.5') Topock -								
	-				Weathered Bedrock - conglomerate; Sandy silt with								
156	-				gravel (ML)								
├ <u>, </u>													
157													
		ML											
158													
159													
 													
160 Abbreviations	USCS	 =	ied Soil	Classification	on System, ft = feet, bgs =	hel	ow are	und (surface am	sl = ahove	mean sea	م اوریوا	GW = aroundwater
, word vialiding.				- woomball	yourn, n - noon, byo -	~~!	- ** yı U	und i	zanavo, aili	S GDOVE	THOUSE SUC	~ 1~ V C I	, Orr groundwatel

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwage Remarks: NR = no recovery, blue water table symbol represents depth to water measured during the first VAS interval for RB-3 Pilot

9/	ARCA	DIS	Design for nat built as	& Consultan ural and ssets	су	Drilling Log	g				Shee	t: 9 of 12
	Started:	08/24/				urface Elevation:			6.3 ft amsl	Borin	g No.:	RB-3
	Completed:					orthing (NAD83):			03172.5			<u> v</u>
Drilling		Casca				asting (NAD83):				Client:	PG&E	Domady Dhoop 1
_	g Method: ig Type:	<u>Dual F</u> <u>Forem</u>	•			otal Depth: onductor Casing Diamet			4 ft bgs inches	Project:		Remedy Phase 1
	Name:	Jon M				rill Casing Diameter:			inches	Loodiion.	T COL TO	pook, ryodioc, damorria
Drilling	g Asst:	A. & H	. Am	ezguit		rill Bit:		<u>15.</u>	.5 inch & 17.5 Tricone	Project N	umber: R	C000753.0051
	Pusher:	Scott				epth to First Water:			.35 ft bgs			
Rig Ge	eologist:	A. Ma	ck / E	. Redi	ner Co	onverted to Well:		X	Yes No			
Depth (ft)	Drilling Ru and Averag Penetration F	e 03		USCS Class	Casing Diameter	Description (See Pilot boring log fo full geologic description			Drilling	Notes		Drilling Fluid
 161	(140.5 - 161.6 1.52 mins/ft				(140.5 - 161.6') 16.0" Steel Casing				(160.0') Observed trace amou (8x10) Lapis Luster Sand in d			g).
 162		1						•	(161.6 - 181.5') Drilled with w	rater.		
163									(163.0') Drill rods chattering.	3		
164												
165		н							(164.8 - 184.8') Drilled with w	ater.		
166		L						F				
167		н										
168		н										
169		L					,					
170		M	L .		(161.6 -				(170.0') Observed trace amou (8x10) Lapis Luster Sand in d	unts of Ceme Irill cuttings (ex #3 MESH see photo log	g).
171	(161.6 - 181.8 1.93 mins/ft	3)			(161.6 - 181.8') 16.0" Steel Casing							
172		L										
173		L										
174		L										
175												
176		н										
177		н										
178												
179	1											
180	<u> </u>].:									
Abbre												level, GW = groundwater
Rema	rks: NR = r	o reco	ery,	blue v	vater table	symbol represents depth	h to	wat	er measured during the	first VAS	interval fo	r RB-3 Pilot

9/	ARCA	DIS	Design & Consultar or natural and puilt assets	псу	Drilling Log			Sheet:	10 of 12
Date 9	Started:	08/24/20)19	S	Surface Elevation:	466.3 ft amsl	Borin	g No.: R	B-3
Date (Completed:	09/07/20)19	N	Northing (NAD83):	2103172.5		9 110 <u>11.</u>	
1	g Co.:	Cascade)		Easting (NAD83):	7616213.0	Client:	PG&E	
Drilling	g Method:	Dual Rot	tary		otal Depth:	224 ft bgs	Project:		emedy Phase 1
	ig Type:	Foremos			Conductor Casing Diameter:		Location:	PG&E Topo	ck, Needles, California
	Name:	Jon Mar			Orill Casing Diameter:	16 inches			
1	g Asst:	A. & H. A	_		Orill Bit:	15.5 inch & 17.5 Tricone	Project N	umber: RC0	00753.0051
	Pusher:	Scott Jo			Depth to First Water:	11.35 ft bgs			
Rig G	eologist:	A. Mack	/ E. Red	ner C	Converted to Well:	× Yes No			
Depth	Drilling Ru	n USCS	USCS	Casing	Description				
(ft)	and Average Penetration F	je I Codo		Diameter	(See Pilot boring log for full geologic descriptions)	Drilling	Notes		Drilling Fluid
181	(161.6 - 181. 1.93 mins/ft			(161.6 - 181.8') 16.0 Steel Casing		(180.0') Observed trace amou (8x10) Lapis Luster Sand in d	rill cuttings (
7 TEMPLATE FOR PLOG.GD	-	ML							
FOR PLOG.GPJ TOPOCK DA1	-				100				
190						(190.0') Observed trace amou	unts of Ceme	ex #3 MESH	
¥	- (181.8 - 201.)	2)		(181.8 - 201.2') 16.0		(8x10) Lapis Luster Sand in d	Irill cuttings (see photo log).	
191	(181.8 - 201.3 1.34 mins/ft	-		. 201.2') 16.0 Steel Casin					
	-	г			(191.5 - 196.0') Topock - Weathered Bedrock - conglomerate; Silty sand with				
		ш			gravel (SM)				
194		SM							
195									
- 197_ 197_					(196.0 - 212.5') Topock - Weathered Bedrock - conglomerate; Sandy silt with gravel (ML)				
198	_	ML		· ·					
199_ 				· · :					
200		200 :							1.004
0					tion System, ft = feet, bgs =	_			-
_∄ Kema	IKS: NR = I	no recove	ry, blue v	water table	symbol represents depth to	water measured during the	TIRST VAS	interval for R	B-3 P110T

9/-	ARCA	D	S Desifor no built	gn & Consultan atural and assets	icy	Drilling Log				Sheet:	11 of 12
Date S			/24/201		S	Surface Elevation:	466.31	t amsl	Borin	g No.: RB	B-3
	ompleted:			9		Iorthing (NAD83):	21031				<u> </u>
Drilling			scade			asting (NAD83):	<u>76162</u>		Client:	PG&E	
	Method:		al Rota	-		otal Depth:	224 ft l	-	Project:	Final GW Rei	-
	g Type:		remost			Conductor Casing Diameter:			Location:	PG&E Topoc	k, Needles, California
Driller I			n Martin			Orill Casing Diameter: Orill Bit:	16 inch		Droiget N	Lumbari DC00	0752 0054
Drilling Tool-P			<u>& H. Ar</u> ott Johr	_		Depth to First Water:	11.35 f	nch & 17.5 Tricone	Projectiv	umber. RC00	0753.0051
	eologist:		Mack /			Converted to Well:	× Yes		-		
Tig Oc	,ologist.	<i>/</i> \.	IVIGOR /	L. I (Cui		T		,			
Depth (ft)	Drilling Ru and Averag Penetration F	ie	USCS Code	USCS Class	Casing Diameter	Description (See Pilot boring log for full geologic descriptions)	1/000		Notes	(0.NEQ)	Drilling Fluid
	(181.8 - 201.2 1.34 mins/ft	2)			(181.8 - 201.2') 16.0 Steel Casin			.0') Observed trace amo 0) Lapis Luster Sand in o			
							(201	2 - 224.0') Drilled with v	vater.		(201.2 - 222.0') 10065 gallons of water used; 8360.8 gallons of water recovered; 1704.2 gallons of water lost
_204 											
206					:						
			ML								
_207					:						
208_					:						
							(208	.0') Hole plugged up.			
209											
L -											
_210							(210	.0') Observed trace amo	unts of Com	27 #3 MESH	_
	(201.2 - 220.5				(201.2 - 220.5') 16.0	ir		(a) Lapis Luster Sand in (
_211	2.54 mins/ft				Steel Casin						
						•					
212					:						
					}	(212.5 - 218.0') Topock -	-				
213					}	Weathered Bedrock - conglomerate; Silty sand with					
						gravel (SM)					
_214					1						
					}						
215			SM		1						
_216					1						
					1						
_217											
					1						
218					1	(218.0 - 224.0') Topock -					
 219						Weathered Bedrock - conglomerate; Sandy silt with					
-413-			ML			gravel (ML)					
220											
		200	:::	ad Call	Classifies	tion System ft - fact has -	به بدیداد ما		J _ ala ava		1 CM = =================================

Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW = groundwater Remarks: NR = no recovery, blue water table symbol represents depth to water measured during the first VAS interval for RB-3 Pilot

ARC	PADIS Design & Consultancy for natural and built assets	Drilling Log			Sheet: 12 of 12
Date Started:	08/24/2019	Surface Elevation:	466.3 ft amsl	Boring I	No.: <u>RB-3</u>
	ed: <u>09/07/2019</u>	Northing (NAD83):	2103172.5		
Drilling Co.:	<u>Cascade</u>	Easting (NAD83):			S&E
Drilling Method Drill Rig Type:	d: <u>Dual Rotary</u> Foremost DR-24HD	Total Depth: Conductor Casing Diameter:		-	nal GW Remedy Phase 1 G&E Topock, Needles, California
Driller Name:	Jon Martinez	Drill Casing Diameter:	16 inches	Location. I C	JOL TOPOCK, NEEdles, California
Drilling Asst:	A. & H. Amezguita	Drill Bit:	15.5 inch & 17.5 Tricone	Project Numl	ber: RC000753.0051
Tool-Pusher:	Scott Johnson	Depth to First Water:	11.35 ft bgs	•	
Rig Geologist:	A. Mack / E. Redner	Converted to Well:	× Yes No		
Depth Drilling	ı Run	Description			
Depth and Av (ft) Penetrati	erage Codo Class Di	casing ameter (See Pilot boring log for full geologic descriptions)	Drilling	Notes	Drilling Fluid
	no/ft 224.	220.5 - .0') 16.0"	(220.0') Observed trace amous and in drill cuttings (see pho		astering
223	Stee	el Časing		3	
224		End of Daving at 224.0 lbgs			
		End of Boring at 224.0 'bgs.			
_225					
06.601					
226_			A		
227_					
228_					
229					
230_					
231_					
232					
_233					
_234					
235_					
_236					
237					
238					
239					
240					
		ssification System, ft = feet, bgs = er table symbol represents depth to			

AH	SCA	DIS	Design & Consultancy for natural and built assets		Bo	ring	Log		Sh	eet: 1 of	13
Date Star	ted:	04/25/2	2019	;	Surface	Elevati	on: 466.3 ft amsl	Borin	a No.:	: RB-3 Pilo	ot
Date Con	-				Northing	- '	•			. <u>110 01 110</u>	
Drilling Co		Cascad			Easting	•	,		PG&E		
Drilling M		Sonic E	-		Total De	-	-			W Remedy Ph	
Drill Rig T			onic track mo		Borehol			Location:	PG&E	Topock, Topoc	k, California
Driller Na Drilling As		Dan O'l	<u>мага</u> Ilmantel / J. I		-		Vater: <u>11.35 ft bgs</u> od: <u>4 inch x 10 ft Core Barrel</u> F	Droiget N	ımbor:	DC000753 006	
Logger:	331.	Gantt J			Samplin	-		i iojectivi	umber.	110000733.000	, 1
Editor:		Grant V			Convert	•					
<u> </u>	,				1						
Depth (ft) Recovery	(ii) Sa	Sieve ample ID	Groundwater Sample ID	Geologic Formation	Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
1	0						(0.0 - 8.0') Topock - Fill; Poorly graded sand (SP); 6/3); fine grained to medium grained, subangular to dry; roots and wood fragments present			(0.0 - 4.0') No recovery due to loose dredge sands.	
!	2			Topock - Fill	SP			•			
- 5							(5') very fine grained to medium grained; trace silt; size (6.5'); moist; iron oxide staining; no roots or fragme		grain	(5.0 - 10.0') Poor recovery due to loose dredge sands.	
- 9	66				NR		(8.0 - 15.0°) No recovery (NR)			(11.5') Approximate Depth to Water	
14 15							(15.0 - 18.0') Topock - Fill; Poorly graded sand (SF	P); dark gray			
16 17 3 18	5/2 0	3-SS-15- 18 2/2019 19:19	RB-3-VAS- 15-20 (<0.033 U) 4/26/2019 15:35	Topock - Fill	SP		brown / dark yellowish brown(10YR 4/2); very fine grained, subangular to round; trace silt; trace orgar wet; organic odor	grained to m	edium		
19					NR		(18.0 - 20.0') No recovery (NR) feet, bgs = below ground surface, an				N

9/	AR(CADIS	Design & Consultancy for natural and built assets		Во	ring	Log					She	eet: 2 of	13
Date S	Started	: <u>04/25/2</u>	2019		Surface	Elevat	ion: <u>466</u>	3.3 ft am	sl		Borin	ua No .	RB-3 Pilo	nt
Date C	Comple	eted: <u>05/07/2</u>	2019		Northin	g (NAD	83): <u>210</u>	3172.5			Born	ig 110	IXD OT IX	<u>5t</u>
Drilling		<u>Cascac</u>	de		Easting		3): <u>761</u>	16213.0			Client:	PG&E		
Drilling					Total D	-		ft bgs			Project:		W Remedy Ph	
Drill R			onic track mo						i		Location	: <u>PG&E T</u>	<u> Fopock, Topo</u>	ck, California
Driller							Water: <u>11.</u>					. —		
Drilling			llmantel / J.		-	-				rel	Project N	lumber: <u>I</u>	RC000753.00	51
Logge Editor:		<u>Gantt J</u> <u>Grant V</u>			Samplir Convert	-		<u>ntinuous</u> Yes						
Luitoi.		Gianii v	l		T		veii.	165] 140					I
Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	OSCS Code	USCS Class			Soil Descript				Drilling Notes	Drilling Fluid
21 22 23 23 24	60	RB-3-SS-20- 25 5/2/2019 09:21					brown / dark	yellowish bi o fine grain	ill; Poorly grade rown(10YR 4/2) ed, subangular t	little blad	k (5Y 2.5/1);	very		
25 26 27 28 29 30	96	RB-3-SS-25- 30 5/2/2019 09:24		Topock - Fill	SP		sand grain si (27.5') dark g grained to fin change	grayish brow e grained; r	very fine graine ange vn / dark yellowis no organics; incr	ish brown rease in s	(10YR 4/2); sand grain siz	very fine ze, color		(25.0 - 35.0') 10 gallons of water used; 0 gallons of water recovered; 10 gallons of water lost
31 32 33 34		RB-3-SS-30- 33 5/2/2019 09:26			NR		(33.0 - 35.0°)	No recover	y (NR)					
 2F						/ \								
35 36 37 38 39	108	RB-3-SS-35- 40 5/2/2019 09:39		Topock - Fill			brown / dark grained, suba	yellowish bi	ill; Poorly grade own(10YR 4/2) ound; trace mica); very fin a; wet	e grained to ı	medium		(35.0 - 45.0') 15 gallons of water used; 0 gallons of water recovered; 15 gallons of water lost
40					SW	000000			luvial Deposits;					
Abbre	viation	s: USCS = l	Jnified Soil (Classification	on Syste	em, ft =	feet, bgs	= below	ground surf	face, a	msl = abo	ove mear	n sea level, G	W =

Drilling Method: <u>Sonic Drilling</u> Total Depth: <u>245 ft bgs</u> Project: <u>Final GW Remedy Phase 1</u> Drill Rig Type: <u>Terrasonic track mount</u> Borehole Diameter: <u>6-12 inches</u> Location: <u>PG&E Topock, Topock, California</u>	9/	\R(ADIS	Design & Consultancy for natural and built assets		Во	ring	Log	SI	neet: 3 of	13
Nothing (No. 1997) Cascade Cast (No. 1997) Cascade Cas									Boring No.	: RB-3 Pile	ot
Dolling Method: Dolling New Horizon Committed Framework Committed For Co								,			<u></u>
Description	_					_	•	•			
Daller Marter Dan O'Marta Dillor Marter Dillor Marter Dan O'Marta Dan O'Marta Deposits Sampling Method: J. J. Pachosco. Sampling Method: J. J. Dan D'Marta Continuous Sampling Method: J. J. Dan D'Marta Continuous Sampling Method: J. J. Dan D'Marta Sampling Method: J. J. Dan D'Marting Method: J. Dan D'Marting Me	_			_			•			•	
Dalling Assist E. Huellmanter J. Pachase Sampling Interval Conditionus Co									Location: <u>PG&E</u>	Topock, Topo	ck, California
Continue						•		<u> </u>	Project Number	DC000752.00	<u> </u>
Editor:	_					-	-		Project Number.	RC000753.00	31
Simple D						-	-				
1			<u> </u>			1					
14	Depth (ft)	Recovery (in)			Geologic Formation	USCS	USCS Class	Soil Description		Drilling Notes	
46 - 47	42 43 	108	44 5/2/2019		Fluvial			to round; trace granules to large pebbles, round;			gallons of water used; 0 gallons of water recovered; 15 gallons of water
- 48 _	 46 				Fluvial	sw		brown (10YR 5/3); very fine grained to very coar to round; trace granules to large pebbles, round;	se grained, subround trace mica; wet		gallons of water used; 0 gallons of water recovered; 10 gallons of water
Filvial Deposits SP Drown (10YR 5/3); fine grained, subround to round; trace mica; wet	 49 	72	50 5/2/2019		Fluvial	GW		(GW); dark grayish brown / dark yellowish brown to small cobbles, subround to round; some very grained sand, subangular to round; trace silt; sor composed of metadiorite; trace mica; wet	(10YR 4/2); granules fine to very coarse me coarser clasts		
		12				SP		(50.0 - 51.0') Topock - Fluvial Deposits; Poorly g brown (10YR 5/3); fine grained, subround to rour	graded sand (SP); nd; trace mica; wet		
	51					<u> </u>					
Topock - Fluvial Deposits RB-3-SS-56-60 5/2/2019 09:53 RB-3-SS-56-60 ML Topock - Fluvial Deposits GW Topock - Fluvial Deposits; Silt with sand (ML); brown (7.5 YR 5/4); medium plasticity, slow dilatency; little very fine to very coarse grained sand, subangular to round; trace silt; some coarser clasts composed of metadiorite; trace mica; wet GW Topock - Fluvial Deposits; Silt with sand (ML); brown (7.5 YR 5/4); medium plasticity, slow dilatency; little very fine to very coarse grained sand, subangular to subround; little clay; trace small to very large pebbles, subround to round; trace subround; trace organics; trace mica; wet; soft to medium stiff ML ML (59.5 - 65.0') Topock - Alluvium Deposits; Sandy silt with gravel (ML);	53 _ 54 _ 54		56 5/2/2019	50-55 (0.100 J) 4/27/2019		NR					
RB-3-SS-56- 60 Topock - Fluvial Deposits; Silt with sand (ML); brown (7.5/YR 5/4); medium plasticity, slow dilatency; little very fine to very coarse grained sand, subangular to subround; little clay; trace small to very large pebbles, subround to round; trace subround; trace organics; trace mica; wet; soft to medium stiff ML ML (57.0 - 59.5') Topock - Fluvial Deposits; Silt with sand (ML); brown (7.5/YR 5/4); medium plasticity, slow dilatency; little very fine to very coarse grained sand, subangular to subround; little clay; trace small to very large pebbles, subround to round; trace subround; trace organics; trace mica; wet; soft to medium stiff ML (59.5 - 65.0') Topock - Alluvium Deposits; Sandy silt with gravel (ML);					Fluvial	GW		(GW); dark grayish brown / dark yellowish brown to small cobbles, subround to round; some very t grained sand, subangular to round; trace silt; sor	n(10YR 4/2); granules fine to very coarse		gallons of water used; 0 gallons of water recovered; 15 gallons of water
	 58 	120	60 5/2/2019		Fluvial	ML		(7.5YR 5/4), medium plasticity, slow dilatency; lit coarse grained sand, subangular to subround; lit very large pebbles, subround to round; trace sub	tle very fine to very ttle clay; trace small to		
	-					- 		(59.5 - 65.0') Topock - Alluvium Deposits; Sand	y silt with gravel (ML):		
		/iation	s: USCS =	■ Unified Soil C	L Classificati		<u> </u>	, , ,		l I an sea level G	W =

9/	ARC	CADIS	Design & Consultancy for natural and built assets		Во	ring	Log				She	eet: 4 of	13
Date S					Surface			66.3 ft amsl		Boring	ı No.:	RB-3 Pilo	ot
		eted: <u>05/07/2</u>			Northing			103172.5					<u> </u>
Drilling		Casca			Easting	•	•	616213.0		_	PG&E		
Drilling	-		-			•						W Remedy Ph	
Drill Ri			onic track mo					12 inches		Location: I	G&E	Lopock, Lopoc	k, California
Driller Drilling			llmantel / J. I		•			1.35 ft bgs inch x 10 ft Core B	Rarrel	Project Nu	mher	PC000753 004	 51
Logge		Gantt J			Samplin	-		ontinuous	<u>Janci</u>	i iojectiva	iiiibci. j	1.0000733.000	<i>7</i> I
Editor:			Willford		Convert	-		Yes No					
				υ 5									
Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS	USCS Class		Soil Desc	cription			Drilling Notes	Drilling Fluid
61 - 62 - 62 - 63 64 - 65	120	RB-3-SS-60- 65 5/2/2019 09:58		Topock - Alluvium Deposits	ML		dilatency; s some very coarser cla weak ceme	YR 4/3) trace weak red (2 ome granules to very larg fine to very coarse graine sts composed of metadior intation; interbeded silt an athered pebbles	ge pebbles, a ed sand, angu rite; trace mid	ingular to subai ular to subroun ca; moist; very	ngular; d; stiff;		(55.0 - 65.0') 15 gallons of water used; 0 gallons of water recovered; 15 gallons of water lost
03 66				Topock - Alluvium Deposits	GM		brown (7.5 subangula	o') Topock - Alluvium Dep YR 4/3); granules to very ; and very fine to very coa	large pebble arse grained	s, angular to sand, angular	to	(65.0 - 75.0') Rough drilling	(65.0 - 75.0') 15 gallons of water used; 0 gallons of water
67 68 69 70	120	RB-3-SS-65- 70 5/2/2019 10:01					mica; wet (66.0 - 77.1 reddish bro coarse gra pebbles, an clay; coars weak ceme	ittle silt; coarser clasts con the silt of the silt; coarser clasts con the silt of the si	posits; Silty sa 2.5YR 4/6); fi ar; some gran ne silt; trace s etadiorite; trace	and with gravel ne grained to v nules to very la subangular; trac ce mica; dry to	(SM); ery erge ce moist;		recovered; 15 gallons of water lost
		RB-3-SS-70- 75 5/2/2019 10:06		Topock - Alluvium Deposits	SM		. ,	ilt; increase in granules a	·				
76 77 78	120	RB-3-SS-75- 80 5/2/2019 10:10		Topock - Alluvium Deposits	ML		reddish bro dilatency; s some angu	0') Topock - Alluvium Dep wn (5YR 5/4) trace red (2 ome granules to very larg lar to subangular; trace cl ; trace mica; wet; very stif	2.5YR 4/6); n ge pebbles, a lay; coarser o	io plasticity, no ingular to subai clasts compose	ngular; ed of		
79 79				Topock - Alluvium	SM		pebbles (79.0 - 89.1 reddish bro	0') Topock - Alluvium Dep wn (5YR 5/4) trace red (2	oosits; Silty sa 2.5YR 4/6); fi	and with gravel ne grained to v	(SM);		
80 Abbres	viation	e: 11909 - 1	Inified Soil C	Deposits	on Sveta	m ft -		ned, angular to subangula s = below ground s		•	ŭ	n sea level C\	Λ/ =
' MNIG	v iatiOi l	J. JUJU - (ornica oui C	,,aooiiioali	JII UYJE	,, it -	icci, by	S POIDW GIOUIN S	ourauc, a	– abul	- mea	., Joan Livel, G	–

9/	AR(CADIS	Design & Consultancy for natural and built assets		Во	ring	Log	Sheet: 5 of	13
Date S	Started	d: <u>04/25/</u>	2019	;	Surface	Elev	tion: 466.3 ft amsl Boring I	No.: RB-3 Pilo	nt
	•	eted: <u>05/07/</u>			Northin		D83): <u>2103172.5</u>		<u></u>
Drilling	g Co.:	<u>Casca</u>	de	I	Easting	(NAE	, —	&E	
Drilling	y Meth	od: <u>Sonic</u>	Drilling		Total D	-	· · · · · · · · · · · · · · · · · · ·	<u>al GW Remedy Ph</u>	
Drill R			onic track mo					&E Topock, Topoc	ck, California
Driller					-		Water: 11.35 ft bgs		
Drilling			ellmantel / J.		-	-		per: <u>RC000753.00</u>	51
Logge			Jeffers		Samplir	-			
Editor:		Grant	Willford		Conver	tea to	Well: ⊠ Yes □ No		1
Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	OSCS Code	USCS	Soil Description	Drilling Notes	Drilling Fluid
81 82 83 84 85 86 87	120	RB-3-SS-80- 85 5/2/2019 10:18 RB-3-SS-85- 90 5/2/2019	RB-3-VAS- 80-85 (0.132 J) 4/27/2019 15:18	Topock - Alluvium Deposits	SM		pebbles, angular to subangular; some silt; coarser clasts composed metadiorite; trace mica; wet; weak cementation; interbedded silt and granule to very large pebble lenses, weathered pebbles (81.5'); and granules to very large pebbles, angular to subangular; little silt; none cementation (87') reddish brown / moderate brown(5YR 4/4); some granules to very large pebbles, angular to subangular; some silt; trace clay; we	Geology osberved good interval to collect a sample	(85.0 - 95.0') 20 gallons of water used; 0 gallons of water recovered; 20 gallons of water lost
88 89 90	120	5/2/2019 10:21		Topock -	ML		(89.0 - 91.0') Topock - Alluvium Deposits; Sandy silt with gravel (Meddish brown / moderate brown(5YR 4/4) trace red (2.5YR 4/6); n plasticity, no dilatency; some very fine to very coarse grained sand angular to subround; little granules to very large pebbles, angular to	L);	
 91 	120			Deposits	W.L.		subangular; trace subangular; trace clay; trace mica; coarser clasts composed of metadiorite; moist; weak cementation; interbedded ve fine to very coarse sand and granule to very large pebble lenses, weathered pebbles (91.0 - 95.0') Topock - Alluvium Deposits; Silty sand with gravel (S reddish brown / moderate brown(5YR 4/4) trace red (2.5YR 4/6); fil	y M);	
92 93 		RB-3-SS-90- 95 5/2/2019 11:09		Topock - Alluvium Deposits	SM		grained to very coarse grained, angular to subangular; some granu to very large pebbles, angular to subangular; some silt; coarser cla composed of metadiorite; trace mica; wet; interbedded silt and gran to very large pebble lenses, weathered pebbles	es l its	
94									
L _									
95							N (07 0 404 5) T		(05.0. 105.0"
96 97 98 99	120	RB-3-SS-95- 100 5/2/2019 11:11		Topock - Alluvium Deposits	GM		(95.0 - 101.5') Topock - Alluvium Deposits; Silty gravel with sand (GM); reddish brown / moderate brown(5YR 4/4) trace red (2.5YR 4/6); granules to very large pebbles, angular to subangular; some vine to very coarse grained sand, angular to subround; little silt; coarser clasts composed of metadiorite; trace mica; wet; interbedde silt and very fine to very coarse sand lenses, weathered pebbles	·	(95.0 - 105.0') 25 gallons of water used; 0 gallons of water recovered; 25 gallons of water lost
100					<u>L</u>	\mathbb{R} $\mathbb{N}_{\mathbb{N}}$			
	viation	s: USCS =	Unified Soil C	Classification	on Svst	em. ft	= feet, bgs = below ground surface, amsl = above	mean sea level. G'	W =

9/	ARC	ADIS	Design & Consultancy for natural and built assets		Во	ring	Log	9		She	eet: 6 of	13
Date S	Started	: <u>04/25/</u>	2019		Surface	Eleva	tion:	466.3 ft amsl	Borin	a No.:	RB-3 Pilo	ot
Date C	Comple	eted: <u>05/07/</u>	2019		Northing	g (NAD	983):	2103172.5		9	112 01 111	<u> </u>
Drilling	g Co.:	<u>Casca</u>	de		Easting	(NAD	33):	7616213.0	Client:	PG&E		
Drilling	y Meth	od: <u>Sonic</u>	Drilling		Total De	epth:		245 ft bgs	Project:	Final G	W Remedy Ph	nase 1
Drill Ri	ig Туре	e: <u>Terras</u>	onic track mo	ount	Borehol	le Dian	neter:	6-12 inches	Location	PG&E]	<u> Fopock, Topoc</u>	ck, California
Driller	Name							: <u>11.35 ft bgs</u>	-			
Drilling			<u>ellmantel / J. I</u>		-	-		4 inch x 10 ft Core Barrel	Project N	lumber: <u>I</u>	RC000753.00	51
Logge			<u>Jeffers</u>		Samplir	•		Continuous	-			
Editor:		<u>Grant</u>	Willford		Convert	ted to \	Nell:	X Yes				
Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
 101				Topock - Alluvium Deposits	GM							(95.0 - 105.0') 25 gallons of water used; 0 gallons of water recovered; 25
102 103 104 105	120	RB-3-SS- 100-105 5/2/2019 11:16		Topock - Alluvium Deposits	SM		(SM); ro 4/6); fin some g coarser cement weathe (102.5)	- 105.0') Topock - Alluvium Deposits; Silt eddish brown / moderate brown(5YR 4/4) the grained to very coarse grained, subang ranules to very large pebbles, angular to clasts composed of metadiorite; trace milation; interbedded silt and granule to very red pebbles; some silt; trace clay	trace red (2.5 gular to subrou subangular; li ica; wet; weak	SYR und; ttle silt;		gallons of water lost
106 107 108		RB-3-SS- 105-107 5/2/2019 11:18		Topock - Alluvium Deposits	GM		(GM); r granule to very clasts c	- 108.0') Topock - Alluvium Deposits; Silt eddish brown / moderate brown(5YR 4/4); st to very large pebbles, angular to suban coarse grained sand, angular to subroun composed of metadiorite; trace mica; wet; e to very coarse sand lenses, weathered) little red (2.5) gular; some v d; little silt; co interbedded s	YR 4/6); ery fine arser		(105.0 - 115.0') 25 gallons of water used; 0 gallons of water recovered; 25 gallons of water lost
108 109		11.10		Topock - Alluvium Deposits	SM		(SM); re fine gra granule	- 109.0') Topock - Alluvium Deposits; Silt eddish brown / moderate brown(5YR 4/4) ined to very coarse grained, subangular is to very large pebbles, angular to suban) little red (2.5) to subround; s igular; some s	YR 4/6); some ilt;		
	120	RB-3-SS- 110-115 5/2/2019 11:21		Topock - Alluvium Deposits	GM		silt and (109.0 (GM); r 4/6); gr fine to v coarser silt and	clasts composed of metadiorite; trace migranule to very large pebble lenses, wea - 115.0') Topock - Alluvium Deposits; Silt eddish brown / moderate brown (5YR 4/4) anules to very large pebbles, angular to svery coarse grained sand, angular to subclasts composed of metadiorite; trace mivery fine to very coarse sand lenses, we	thered pebble ty gravel with :) trace red (2.3 subangular; ar angular; little s ica; wet; intert athered pebbl	s sand 57YR dd very silt; sedded es		
116 117 118 119 120	120	RB-3-SS- 115-120 5/2/2019 11:24		Topock - Alluvium Deposits	SM		(SM); rifine granule granule angular interbec pebbles	- 135.0') Topock - Alluvium Deposits; Siltedish brown / moderate brown(5YR 4/4) inned to very coarse grained, subangular test to very large pebbles, angular to suban; coarser clasts composed of metadiorite dided silt and granule to very large pebbles.	little red (2.5° to subround; sigular; some s; trace mica; vilenses, weath	YR 4/6); some illt; trace vet; ered		

9/	ARC	ADIS	Design & Consultancy for natural and built assets		Во	ring	Log	St	neet: 7 of	13
	Started				Surface			Boring No.	: <u>RB-3 Pilo</u>	ot
l l	•	eted: <u>05/07/2</u>			Northin	• •	•	_		_
Drilling	-	Casca			Easting	•	•	_ Client: PG&E		4
Drilling	-		onic track mo		Total De Borehol	-	245 ft bgs neter: 6-12 inches		SW Remedy Ph	
Drill R Driller							Water: <u>11.35 ft bgs</u>	_ Location: <u>PG&E</u>	тороск, торос	JK, Calliottia
Drilling			Ilmantel / J. I		-		_	Proiect Number:	RC000753.00	 51
Logge	-	Gantt J			Samplir	-		_		<u> </u>
Editor		<u>Grant \</u>	<u> Willford</u>	(Conver	ted to V	Vell: ⊠ Yes ☐ No			
_	ery			. <u>5</u> Fo	(0.4)	(0, 10				
Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
	120	RB-3-SS- 120-125 5/2/2019 11:31	RB-3-VAS- 120-125 (<0.17 U) 4/28/2019 11:29				(120.5'); weak cementation; increase in silt, depebbles	crease in granule to		(125.0 - 135.0') 25 gallons of water used; 0 gallons of water recovered; 25 gallons of water
127_ - 128_ - 129_ - 130_	120	RB-3-SS- 125-130 5/2/2019 11:44		Topock - Alluvium Deposits	SM		(127.5'); none cementation; increase in granule sit	e to pebbles, decrease		lost
131										
132		RB-3-SS-								
133		130-135 5/2/2019 11:46								
134										
135						i y D	(135.0 - 144.5') Topock - Alluvium Deposits; S	ilty gravel with sand		(135.0 - 145.0')
136 137		RB-3-SS-					(GM); reddish brown / moderate brown(5YR 4/ 4/6); granules to small cobbles, angular to sub to very coarse grained sand, angular to suband clasts composed of metadiorite; trace mica; we very fine to very coarse sand lenses, weathere	angular; and very fine gular; little silt; coarser tt; interbedded silt and		25 gallons of water used; 0 gallons of water recovered; 25 gallons of water lost
<u> </u>	120	135-140 5/2/2019		Topock - Alluvium	GM					
138		11:50		Deposits						
139						PL P				
140 Abbre	viation	s: USCS = l	Jnified Soil C	L Classificatio	on Syste	p [] [] em, ft =	feet, bgs = below ground surface,	amsl = above mea	an sea level, G	W =

Date S					Bo		,			
	tarted	: <u>04/25/</u>	2019		Surface	Elevation:	466.3 ft amsl	Boring N	o.: RB-3 Pilo	ot
	-	eted: <u>05/07/</u>				g (NAD83):	2103172.5	-		
Drilling		<u>Casca</u>			_	(NAD83):	7616213.0	Client: PG		
-	Meth		•	7		•	245 ft bgs	•	al GW Remedy Ph	
	д Туре		sonic track mo				6-12 inches	Location: <u>PG</u>	<u> &E Topock, Topoc</u>	ck, California
	Name:				-		11.35 ft bgs	·		
-	Asst:		ellmantel / J.		-	-	4 inch x 10 ft Core Barrel	Project Numb	er: <u>RC000753.00</u>	51
_oggei			Jeffers		-	ng Interval:	Continuous	-		
Editor:		<u>Grant</u>	Willford	(Conver	ted to Well:				
Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
	120	RB-3-SS- 140-145 5/2/2019 11:54		Topock - Alluvium Deposits	GM					(135.0 - 145.0' 25 gallons of water used; 0 gallons of wate recovered; 25 gallons of wate lost
145						: : : (SM);	- 149.0') Topock - Alluvium Deposits; Sil eddish brown / moderate brown(5YR 4/4 te grained to very coarse grained, suban	trace red (2.5YR		(145.0 - 155.0)
146 - 147 - 148 - 149		RB-3-SS- 145-150 5/2/2019 11:57		Topock - Alluvium Deposits	SM	some coarse silt and	ranules to very large pebbles, angular to clasts composed of metadiorite; trace m granule to very large pebble lenses	subangular; some si ica; wet; interbedded		35 gallons of water used; 0 gallons of wate recovered; 35 gallons of wate lost
_						(GM);	- 152.0') Topock - Alluvium Deposits; Sil eddish brown / moderate brown(5YR 4/4) trace red (2.5YR		
150_ - 151_ - 152_	120		DD 0.V40	Topock - Alluvium Deposits	GM	to very clasts	anules to small cobbles, angular to subal coarse grained sand, angular to subangi composed of metadiorite; trace mica; wet; ery fine to very coarse sand lenses	ular; some silt; coarse	er	
-104		RB-3-SS- 150-155	RB-3-VAS- 150-155				- 155.0') Topock - Alluvium Deposits; Sil			
		5/2/2019 12:05	(<0.17 U) 4/29/2019 10:13	Topock - Alluvium Deposits	SM	4/6); fi granul coarse	eddish brown / moderate brown(5YR 4/4 te grained to very coarse grained, angula is to very large pebbles, angular to subar clasts composed of metadiorite; trace m granule to very large pebble lenses	ir to subround; some ngular; some silt;		
155							- 191.5') Topock - Weathered Bedrock -			
 _156 _ _ _157 _ _ _158	120	RB-3-SS- 155-160 5/2/2019 12:11		Topock - Weathered Bedrock - conglomerate	ML	silt with 3/6); lo sand, angula clasts weak o	gravel (ML); reddish brown (2.5YR 4/4) w plasticity, no dilatency; some very fine ubangular to subround; little granules to to subangular; trace angular to subangusomposed of metadiorite; trace mica; moismentation; interbedded very fine to very to very large pebble lenses	trace dark red (2.5Yi to very coarse graine very large pebbles, ılar; trace clay; coars st; very stiff to hard;	Core is moderately cemented	
 _159										
_ _159										

9/	ARC	ADIS	Design & Consultancy for natural and built assets		Во	ring l	Log			She	eet: 9 of	13
Date S						Elevation		466.3 ft amsl	Borii	na No.:	RB-3 Pilo	ot
	-	eted: <u>05/07/2</u>				g (NAD8	,	2103172.5	_			
Drilling		Cascad				(NAD83		7616213.0	_ Client:	PG&E		
Drilling	•		-		Total D	-		245 ft bgs	_ Project:		W Remedy Ph	
Drill R Driller			onic track mo	ount				6-12 inches 11.35 ft bgs	_ Location	i. PG&E	Topock, Topoc	k, Calliornia
Drilling			llmantel / J. l	Pacheco	-			4 inch x 10 ft Core Barrel	Project I	Jumber	RC000753.005	 51
Logge	-	Gantt J			-	ng Interv		Continuous				•
Editor		Grant V	Villford		-	ted to W		Yes □ No				
	ک			.º E								
Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	Code	USCS		Soil Description			Drilling Notes	Drilling Fluid
							(160'); d	ry			(155.0 - 165.0') Core is	
161											moderately cemented groundwater	
 162											sample to be collected above	
	120	RB-3-SS- 160-165										
163		5/2/2019 12:13							9			
164												
165								100			(165.0 - 175.0')	(165.0 - 175.0')
 166											Rough drilling	30 gallons of water used; 10
												gallons of water recovered; 20 gallons of water
167		RB-3-SS-										lost
-		165-170 5/2/2019										
168		12:14										
 169							U					
109							(169'); d	ry				
170	120			Topock - Weathered	ML							
				conglomerat	е							
171				ì								
 172												
		RB-3-SS- 170-175 5/2/2019										
173		5/2/2019 12:18										
174												
 175												
176												
-												
177		RB-3-SS-										
 178	120	175-180 5/2/2019 12:20										
-''^		12.20										
179												
<u> </u>												
180	viotios	c: 11909 - 1	Inified Sail C	lacoificati	on Sunt	om ft = 1	foot L	ogs = below ground surface,	amel = ab	ove mes	n soa laval. Ci	N -
Lynnie,	vialiOH	a. UOUO – l	JIIIIGU JUII (/เลออเเเCall	un oyst	⊏ııı, ıι – I	ıccı, l	ys - pelow ground sunace,	amsı – ab	ove mea	ıı sca icvel, G'	/v —

9/	ARC	ADIS	Design & Consultancy for natural and built assets		Boring Lo	g	Sh	eet: 10 of	13
Date S	tarted	: <u>04/25/</u>	2019	{	Surface Elevation:	466.3 ft amsl	Boring No.:	· RB-3 Pilo	nt .
	-	eted: <u>05/07/</u>		1	Northing (NAD83):	<u>2103172.5</u>		<u> </u>	<u>^•</u>
Drilling		<u>Casca</u>	de		Easting (NAD83):	<u>7616213.0</u> CI	lient: <u>PG&E</u>		
Drilling			<u>Drilling</u>		Total Depth:	<u> </u>	•	W Remedy Ph	
	g Type		onic track me		Borehole Diamete		ocation: <u>PG&E</u>	<u>Topock, Topoc</u>	k, California
	Name:				Depth to First Wat	•			
_	Asst:				Sampling Method:		roject Number:	RC000753.005	51
.ogger		-	<u>Jeffers</u>		Sampling Interval:	Continuous			
ditor:		<u>Grant</u>	Willford	_	Converted to Well:	X Yes No		ľ	
Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code USCS Class	Soil Description		Drilling Notes	Drilling Fluid
_ _181_									
4									
_182		RB-3-SS-	RB-3-VAS- 180-185						
4	120	180-185 5/2/2019	(<0.033 U <0.033 U)						
183_		12:22	4/29/2019 15:38						
4			10.00						
184_									
4									
185									
4				Topock - Weathered					
186_				Bedrock -	ML				
4				conglomerate	1 1111				
187		DD 2 CC							
		RB-3-SS- 185-190							
188_		5/2/2019 12:24							
189_									
190_	120								
	.20				(190); dry			
191_									
192_						5 - 196.0') Topock - Weathered Bedrock - cong with gravel (SM); reddish brown (2.5YR 4/4) tra			
		RB-3-SS- 190-195			4/6)	fine grained to very coarse grained, angular to	subangular; some		
193_		5/2/2019 12:28			angı	ıles to very large pebbles, angular to subangula lar; trace clay; coarser clasts composed of meta			
		. 2.20		Topock -	mica	wet			
104				Weathered Bedrock -	SM				
194_				conglomerate	1 1/4 1/4				
105									
195								(195.0 - 215.0')	
_ +								`Rough drilling´	
196					111 (196	0 - 212.5') Topock - Weathered Bedrock - conc	glomerate; Sandv		
- 1	I				silt v	th gravel (ML); reddish brown (2.5YR 4/4) trace no plasticity, no dilatency; some granules to ver	e dark red (2.5YR		
4				1	angi	lar to subangular; some very fine to very coarse	e grained sand,		
197		RB-3-SS-			1.7125 10 1 = 0				
- 197	120	195-200		Topock -	coar	ngular to subround; trace angular to subangular er clasts composed of metadiorite; trace mica;	moist; very stiff to		
4	120			Weathered	ML coar	er clasts composed of metadiorite; trace mica; weak cementation; interbedded very fine to ver granule to very large pebble lenses	moist; very stiff to ry coarse sand		
4	120	195-200 5/2/2019			ML : Caar ML : Marc and	er clasts composed of metadiorite; trace mica; i weak cementation; interbedded very fine to ver granule to very large pebble lenses 5'); low plasticity; little granules to very large pe	moist; very stiff to ry coarse sand		
- 198_ -	120	195-200 5/2/2019		Weathered Bedrock -	ML Coar hard and (197 suba	er clasts composed of metadiorite; trace mica; in weak cementation; interbedded very fine to ver granule to very large pebble lenses 5'); low plasticity; little granules to very large pengular; increase in silt, decrease in sand, no co	moist; very stiff to ry coarse sand abbles, angular to abbles		
	120	195-200 5/2/2019		Weathered Bedrock -	ML coar ML and (197 suba	er clasts composed of metadiorite; trace mica; i weak cementation; interbedded very fine to ver granule to very large pebble lenses 5'); low plasticity; little granules to very large pe	moist; very stiff to ry coarse sand abbles, angular to abbles		

9 A	RC	ADIS	Design & Consultancy for natural and built assets		Boring Lo	g	:	Sheet: 11 of	13
Date St	arted:	04/25/	2019		Surface Elevation:	466.3 ft amsl	Boring No	o.: <u>RB-3 Pilo</u>	ot .
	-	ted: <u>05/07/</u>			Northing (NAD83):	2103172.5			<u></u>
Drilling (<u>Casca</u>	ide		Easting (NAD83):	7616213.0	_ Client: PG&	E	
Drilling I			Drilling		Total Depth:	245 ft bgs	•	I GW Remedy Ph	
Orill Rig			sonic track m		Borehole Diameter:		_ Location: <u>PG&</u>	E Topock, Topoc	k, California
Oriller N					Depth to First Wate	_	<u> </u>		
ر Drilling					Sampling Method:	4 inch x 10 ft Core Barrel	_ Project Numbe	er: RC000753.005	51
_ogger:			<u>Jeffers</u>		Sampling Interval:	Continuous	-		
Editor:		Grant	Willford		Converted to Well:				
Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code USCS Class	Soil Description		Drilling Notes	Drilling Fluid
								(195.0 - 215.0') Rough drilling	
202		RB-3-SS-							
	120	200-205 5/2/2019 12:39							
205						10		(205.0') Sample	
- 206_				Topock -				interval chosen based on	
200_				Weathered Bedrock -	ML			lithology	
207_			DD 0.1/40	conglomerate					
201_		RB-3-SS- 205-210	RB-3-VAS- 205-210						
208		5/2/2019 12:41	(<0.17 U) 4/30/2019						
200		12.11	15:15						
209_									
210_	120								
211_									
. 4									
212_		RB-3-SS-		1					
.		210-215 5/2/2019			(212)	5 - 218.0') Topock - Weathered Bedrock -	conglomerate: Siltv	-	
_213		12:43			∴ ∴ sand	with gravel (SM); reddish brown (2.5YR 4/ ine grained to very coarse grained, angula	4) trace red (2.5YR	<u> </u>	
. 4					granu	les to very large pebbles, angular to subar	ngular; some silt; trace	;	
_214					weak	coarser clasts composed of metadiorite; tra cementation; interbeded silt and granules			
. 4					pebbl	es			
215	_			Topock - Weathered	SM				
				Bedrock - conglomerate	1 1/4/4/4				
216									
				1					
217		RB-3-SS-							
	120	215-220 5/2/2019							
218_		12:44) - 227.0') Topock - Weathered Bedrock -			
-				Topock -		h gravel (ML); reddish brown (2.5YR 4/4) ow plasticity, no dilatency; some granules	trace dark red (2.5YR to very large pebbles,	:	
_219				Weathered Bedrock -	ML angul	ar to subangular; some very fine to very co gular to subround; trace clay; coarser clas	parse grained sand,		
				conglomerate	i metad	liorite; trace mica; moist; very stiff; weak ce	ementation;		
220		. 11000 -	Limitian Cail (Classification		edded sand very fine to very coarse sand bgs = below ground surface,			A /

9/	ARC	ADIS	Design & Consultancy for natural and built assets		Во	ring	Log	3		SI	neet: 12 of	13
	Started			_	Surface			466.3 ft am		Boring No.	: <u>RB-3 Pilo</u>	ot
	-	ted: <u>05/07/2</u>			Northing			2103172.5		_		
Drilling	-	Cascac			Easting	•	83):	7616213.0		_ Client: PG&E		
Drilling	-		-		Total Do			245 ft bgs			SW Remedy Pr	
Drill Ri Driller			onic track mo							_ Location: <u>PG&E</u>	Тороск, Горос	ck, California
Drilling			llmantel / J.		-			11.35 ft bg		 _ Project Number:	PC000753 00	 51
Logge		Gantt J		<u> acrieco</u>	Samplin	-		Continuous			110000733.00	<u> </u>
Editor:			Willford		Convert	-		× Yes		_		
				0.5	1		T					
Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	Code	USCS Class			Soil Description		Drilling Notes	Drilling Fluid
							large pe	bble lenses, we	athered pebbles			
221_												
222												
	120											
223	120			ļ <u>.</u> .								
_				Topock - Weathered	ML							
224				Bedrock - conglomerat								
225												
226												
_227							(227.0	245 0'\ Tapaak	- Weathered Bedrock	conglomorato: Cilty		
							sand wi	th gravel (SM); i	eddish brown (2.5YR 4	4/4) trace red (2.5YR		
228							granule	s to very large p	ebbles, angular to suba	lar to subangular; some angular; some silt; trace		
							metadio	rite; trace mica;	race clay; coarser clas moist; weak cementation			
229							granule	s to pebbles				
230	120											
231							:					
232												
 233							:					
233				Topock - Weathered			(233');	dry to moist; son	ne dry lenses			
234				Bedrock - conglomerat	SIVI							
				Congiornerat			:					
 236												
237												
	120											
238	120											
							:					
239												
<u> </u>]					
240	<u> </u>	11000	1 16 16 11		<u> </u>							
Anhra	VIation	:: USCS = 1	initied Soil (iaeeiticati	on Sveta	m tt =	= 1001	nae = helaw	around curtace	amsl = above me	an coa lovol G	vv =

9/	ARC	ADIS	Design & Consultancy for natural and built assets		Во	ring	Log		She	et: 13 of	13
Date S	Started	: 04/2	5/2019		Surface	Elevat	ion: <u>466.3 ft amsl</u>	Borin	a No .	RB-3 Pilo	nt
Date 0	Comple	eted: <u>05/0</u> 7	7/2019		Northing	g (NAD	83): <u>2103172.5</u>		9 110	TO OT III	<u>^</u>
Drilling		Caso	ade		Easting	(NAD8	(3): <u>7616213.0</u>	_ Client:	PG&E		
Drilling	g Meth	od: <u>Soni</u>	c Drilling		Total De	•	245 ft bgs	_ Project:	Final GV	N Remedy Ph	ıase 1
	ig Type		asonic track mo				eter: <u>6-12 inches</u>	_ Location:	PG&E T	opock, Topoc	k, California
	Name		O'Mara				Water: <u>11.35 ft bgs</u>	_			
	g Asst:		uellmantel / J.					_ Project N	umber: <u>F</u>	RC000753.00	<u>51</u>
Logge			t Jeffers		Samplin	-		_			
Editor		<u>Gran</u>	t Willford		Convert	led to v	Vell: ⊠ Yes □ No				T
Depth (ft)	Recovery (in)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	Code	USCS	Soil Description			Drilling Notes	Drilling Fluid
			no sample (Interval did	Topock -			(241'); dry to moist; some dry lenses				
 243	120		not produce.) 5/1/2019 14:00	Weathered Bedrock - conglomerate	Sivi						
244											
245				<u> </u>			End of Boring at 245.0 'bg	ıs.			
 246											
							7 62,				
 248											
249					.						
250											
251											
252											
253											
254											
255											
256											
257 											
258											
259											
260 Abbre	viation	s: USCS	 = Unified Soil (Classificati	on Svste	 em, ft =	feet, bgs = below ground surface,	amsl = abo	ve mear	 ı sea level. G'	W =

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, J - estimated value, NR = no recovery, blue water table symbol represents depth to water measured during the first VAS interval

Temporary Backfill Log Sheet: Surface Elevation: 466.3 ft amsl 04/25/2019 Well ID: RB-3 Pilot Date Completed: <u>05/07/2019</u> Northing (NAD83): 2103172.5 Drilling Co.: <u>Cascade</u> Easting (NAD83): 7616213.0 Client: PG&E Drilling Method: Sonic Drilling Total Depth: Project: Final GW Remedy Phase I 245 ft bgs Driller Name: Dan O'Mara Borehole Diameter: 6-12 inches Location: PG&E Topock, Needles, California Drilling Asst: E. Huellmantel / J. Pacheco Depth to First Water: 11.35 ft bgs **Grant Willford** Project Number: RC000753.0051 Logger: **Gantt Jeffers** Editor: Geologic Formation USCS Class USCS Depth (ft) Groundwater Calculated Material Volumes Well Construction Sample ID Material Volumes Installed (0.0 - 4.0') 12"(0.0 - 4.5') Choker Borehole (0.0 - 4.5') 6 bags (-15%) (0.0 - 4.5') 7.1 bags Sand Seal Note: Wildcat Washed Plastering Topock - Fill SP NR (4.0 - 245.0') 6" (4.5 - 210.0') Cemex (4.5 - 210.0') 80.7 (4.5 - 210.0') 94 bags (16%) Borehole #3 MESH (8x10) Note: Lapis Lustre Sand baas Topock - Fill SP RB-3-VAS-15-(<0.033 U) 4/26/2019 18 NR Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW =

ARCADIS Design & Consumor for natural and built assets **Temporary Backfill Log** Sheet: Surface Elevation: 466.3 ft amsl 04/25/2019 Well ID: RB-3 Pilot Date Completed: <u>05/07/2019</u> Northing (NAD83): 2103172.5 Drilling Co.: <u>Cascade</u> Easting (NAD83): 7616213.0 Client: PG&E Drilling Method: Sonic Drilling Total Depth: Project: Final GW Remedy Phase I 245 ft bgs Driller Name: Dan O'Mara Borehole Diameter: 6-12 inches Location: PG&E Topock, Needles, California E. Huellmantel / J. Pacheco Depth to First Water: 11.35 ft bgs Drilling Asst: **Gantt Jeffers Grant Willford** Project Number: RC000753.0051 Logger: Editor: Geologic Formation USCS Class USCS Depth (ft) Groundwater Calculated Material Volumes Well Construction Sample ID Material Volumes Installed .21. 22 23 25 26 Topock - Fill SP 28 29 (4.5 - 210.0') Cemex (4.0 - 245.0') 6" (4.5 - 210.0') 80.7 (4.5 - 210.0') 94 bags (16%) 30 #3 MESH (8x10) Borehole Note: Lapis Lustre Sand 32 33 NR 35 36 Topock - Fill 38 39 Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW =

ARCADIS Design & Consumor for natural and hullt assets **Temporary Backfill Log** Sheet: Surface Elevation: 466.3 ft amsl 04/25/2019 Well ID: RB-3 Pilot Date Completed: <u>05/07/2019</u> Northing (NAD83): 2103172.5 Drilling Co.: <u>Cascade</u> Easting (NAD83): 7616213.0 Client: PG&E Drilling Method: Sonic Drilling Total Depth: 245 ft bgs Project: Final GW Remedy Phase I Driller Name: Dan O'Mara Borehole Diameter: 6-12 inches Location: PG&E Topock, Needles, California E. Huellmantel / J. Pacheco Depth to First Water: 11.35 ft bgs Drilling Asst: **Gantt Jeffers Grant Willford** Project Number: RC000753.0051 Logger: Editor: Geologic Formation USCS Class USCS Depth (ft) Groundwater Calculated Material Volumes Well Construction Sample ID Material Volumes Installed Topock -42 SW Fluvial Deposits 43 NR 45 Topock -Fluvial Deposits Topock -Fluvial Deposits (4.5 - 210.0') Cemex (4.0 - 245.0') 6" (4.5 - 210.0') 80.7 (4.5 - 210.0') 94 bags (16%) 50 #3 MESH (8x10) Borehole Note: Lapis Lustre Sand Topock -Fluvial SP Deposits 51 52 RB-3-VAS-50-55 (0.100 J) 4/27/2019 53 NR 55 Topock -56 Fluvial Deposits 57 58 Topock -Fluvial ML Deposits Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW =

ARCA	DIS Design & C for natura built asset	Consultancy l and ts		Temporary E	Backfill Log	S	heet: 4 of 13
Date Started:	04/25/2019			_ Surface Elevation:	466.3 ft amsl	Well ID: R	B-3 Pilot
Date Completed:				_ Northing (NAD83):	2103172.5		
orilling Co.:	Cascade			_ Easting (NAD83):	7616213.0	Client: PG&E	
orilling Method: Oriller Name:	Sonic Drilling Dan O'Mara	-		_ Total Depth: _ Borehole Diameter:	245 ft bgs	•	GW Remedy Phase I Topock, Needles, Californ
rilling Asst:			Pacheco	_ Depth to First Water:		Location. FGQL	Topock, Needles, Callon
ogger:	Gantt Jeffers		4011000	_ Editor:	Grant Willford	 Project Number	: RC000753.0051
	.º 6						
Groundwate Sample ID		USCS	USCS	Well (Construction	Calculated Material Volumes	Material Volumes Installed
	Topock - Alluvium Deposits	ML					
.05_	Topock - Alluvium	GM				*	
.66_	Deposits	GIVI					
- 67 68 68 69				(4.5 - 210.0') Cernex #3 MESH (8x10)	(4.0 - 245.0') 6" Borehole	(4.5 - 210.0') 80.7 bags	(4.5 - 210.0') 94 bags (16%) Note: Lapis Lustre Sand
-7171727373747576777	Topock - Alluvium Deposits	SM					
- – _ 78 _ - – _ 79 _	Topock - Alluvium Deposits	ML					
	Alluvium Deposits	SM					
_ซบเ bbreviations: U	· ·	d Soil C	Classifica	ation System, ft = feet, l	ogs = below ground surfac	ce, amsl = above me	an sea level, GW =
roundwater, ppt	o = parts per b	oillion, l	J = not d	detected above the labo	ratory reporting limit, J - e	stimated value, NR	= no recovery, blue water
able symbol repr				ured during the first VA the well.	S interval Note: Granule b	ackfill material will b	e excavated from the pilot

ARCADIS Design & Consumor for natural and hullt assets **Temporary Backfill Log** Sheet: 13 Surface Elevation: 466.3 ft amsl 04/25/2019 Well ID: RB-3 Pilot Date Completed: <u>05/07/2019</u> Northing (NAD83): 2103172.5 Drilling Co.: <u>Cascade</u> Easting (NAD83): 7616213.0 Client: PG&E Drilling Method: Sonic Drilling Total Depth: 245 ft bgs Project: Final GW Remedy Phase I Driller Name: Dan O'Mara Borehole Diameter: 6-12 inches Location: PG&E Topock, Needles, California E. Huellmantel / J. Pacheco Depth to First Water: 11.35 ft bgs Drilling Asst: **Gantt Jeffers Grant Willford** Project Number: RC000753.0051 Logger: Editor: Geologic Formation USCS Class USCS Depth (ft) Groundwater Calculated Material Volumes Well Construction Sample ID Material Volumes Installed .81 RB-3-VAS-80-85 (0.132 J) 4/27/2019 83 15:18 84 Topock -Alluvium SM Deposits 85 86 87 88 89 Topock -(4.5 - 210.0') Cemex (4.0 - 245.0') 6" (4.5 - 210.0') 80.7 (4.5 - 210.0') 94 bags (16%) 90 ML Alluvium #3 MESH (8x10) Borehole Note: Lapis Lustre Sand Deposits 92 Topock -93 Alluvium SM Deposits 95 96 97 Topock -GM Alluvium Deposits 98 Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW =

ARCADIS Design & Consumor for natural and hullt assets **Temporary Backfill Log** Sheet: Surface Elevation: 466.3 ft amsl 04/25/2019 Well ID: RB-3 Pilot Date Completed: <u>05/07/2019</u> Northing (NAD83): 2103172.5 Drilling Co.: <u>Cascade</u> Easting (NAD83): 7616213.0 Client: PG&E Drilling Method: Sonic Drilling Total Depth: 245 ft bgs Project: Final GW Remedy Phase I Driller Name: Dan O'Mara Borehole Diameter: 6-12 inches Location: PG&E Topock, Needles, California E. Huellmantel / J. Pacheco Depth to First Water: 11.35 ft bgs Drilling Asst: **Gantt Jeffers Grant Willford** Project Number: RC000753.0051 Logger: Editor: Geologic Formation USCS Class USCS Code Depth (ft) Groundwater Calculated Material Volumes Well Construction Sample ID Material Volumes Installed Topock -Alluvium _101_ Deposits 102 _103_ Topock -Alluvium Deposits 104 _105_ _106_ Topock -Alluvium Deposits 107. _108_ Topock -Alluvium Deposits 109 (4.5 - 210.0') Cemex (4.0 - 245.0') 6" (4.5 - 210.0') 80.7 (4.5 - 210.0') 94 bags (16%) 110 #3 MESH (8x10) Borehole Note: Lapis Lustre Sand Topock -Alluvium Deposits 116 Topock -SM Alluvium Deposits 118 Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW =

ARCADIS Design & Consumor for natural and hullt assets **Temporary Backfill Log** Sheet: Surface Elevation: 466.3 ft amsl 04/25/2019 Well ID: RB-3 Pilot Date Completed: <u>05/07/2019</u> Northing (NAD83): 2103172.5 Drilling Co.: <u>Cascade</u> Easting (NAD83): 7616213.0 Client: PG&E Drilling Method: Sonic Drilling Total Depth: 245 ft bgs Project: Final GW Remedy Phase I Driller Name: Dan O'Mara Borehole Diameter: 6-12 inches Location: PG&E Topock, Needles, California E. Huellmantel / J. Pacheco Depth to First Water: 11.35 ft bgs Drilling Asst: **Gantt Jeffers Grant Willford** Project Number: RC000753.0051 Logger: Editor: Geologic Formation USCS Class USCS Depth (ft) Groundwater Calculated Material Volumes Well Construction Sample ID Material Volumes Installed _121. 122 RB-3-VAS-120-125 (<0.17 U) À/28/2019 123_ 11:29 124 125 _126_ 127 Topock -Alluvium SM Deposits 128 129 (4.5 - 210.0') Cemex (4.0 - 245.0') 6" (4.5 - 210.0') 80.7 (4.5 - 210.0') 94 bags (16%) 130 #3 MESH (8x10) Borehole Note: Lapis Lustre Sand 131 132 _135_ 136 137 Topock -Alluvium Deposits 138 _139_ Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW =

ARCADIS Design & Consumor for natural and hullt assets **Temporary Backfill Log** Sheet: 13 Surface Elevation: 466.3 ft amsl 04/25/2019 Well ID: RB-3 Pilot Date Completed: <u>05/07/2019</u> Northing (NAD83): 2103172.5 Drilling Co.: <u>Cascade</u> Easting (NAD83): 7616213.0 Client: PG&E Drilling Method: Sonic Drilling Total Depth: 245 ft bgs Project: Final GW Remedy Phase I Driller Name: Dan O'Mara Borehole Diameter: 6-12 inches Location: PG&E Topock, Needles, California E. Huellmantel / J. Pacheco Depth to First Water: 11.35 ft bgs Drilling Asst: **Gantt Jeffers Grant Willford** Project Number: RC000753.0051 Logger: Editor: Geologic Formation USCS Class USCS Code Depth (ft) Groundwater Calculated Material Volumes Well Construction Sample ID Material Volumes Installed _141_ 142 Topock -Alluvium Deposits _143_ 144 145 _146_ Topock -Alluvium Deposits 149 (4.5 - 210.0') Cemex (4.0 - 245.0') 6" (4.5 - 210.0') 80.7 (4.5 - 210.0') 94 bags (16%) 150 #3 MESH (8x10) Borehole Note: Lapis Lustre Sand Topock -Alluvium GM Deposits _151 152 RB-3-VAS-150-155 (<0.17 U) 4/29/2019 153 Topock -SM Alluvium Deposits _155. 156 157 Topock -Weathered MLBedrock -158 conglomerate _159_ Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW =

Northing (No. 105 Northing (No. 105 Northing (No. 105 No.	Northing (NADS) 2103172.5	ARCA		Consultancy al and ts		Temporary I			neet: 9 of 13
Northing (NADS) 2003172.5 Client DGASC Client Client Color Col	Sales Completed: 5507/2019. Northing (NAD83): 2103172.5. Diffing Method: Seascate Easting (NAD83): 70161 Depth: 245.ft bgs Project: Final GW Remedy Phase I Diffing Anst East Santa Villing Anst Santa Villing Ans	Date Started:	04/25/2019			Surface Elevation:	466.3 ft amsl	—∣ Well ID: RE	3-3 Pilot
Total Depth: Sonic Dilling	Total Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Phase I Depth: 245 ft bgs Project Final GW Remedy Final Fina					- , ,			
Dan CMara Dan	Dan CMara Dan	Orilling Co.:	<u>Cascade</u>			_ Easting (NAD83):	<u>7616213.0</u>	Client: <u>PG&E</u>	
Dan CMara Dan	Description	Orilling Method:	Sonic Drilling]		Total Depth:	245 ft bgs	Project: <u>Final C</u>	SW Remedy Phase I
Second Continued Continued	Section Sect	Oriller Name:	Dan O'Mara			Borehole Diameter:	6-12 inches	Location: PG&E	Topock, Needles, Califor
Carolidade Malerial Volumes Malerial Volumes	Well Construction Cabustand Material Volumes M	Orilling Asst:	E. Huellman	tel / J.	Pacheco	Depth to First Water	: <u>11.35 ft bgs</u>		
161	181	₋ogger:	Gantt Jeffers	S		Editor:	Grant Willford	Project Number:	RC000753.0051
161	181	£ 0tt-	gic	ν _Φ	တ ဖွ			Calandatad	Madada Nalara
162	162 163 164 165 166 166 166 166 166 166 166 166 166	Sample ID	Geolo	DSD DSD	Clas	Well	Construction		
addreviations: 2005 = Unitied 5011 Classification 5ystem, π = teet, dgs = delow ground surface, amsl = above mean sea level, GW =	roundwater, ppb = parts per billion, U = not detected above the laboratory reporting limit, J - estimated value, NR = no recovery, blue water		Weathered Bedrock - conglomerate		Classifica	#3 MESH (8×10)	Borehole	bags	Note: Lapis Lustre Sand
ADMINISTRAL DOD - DODE DO DUMOD LL - DOLDOLOGO ODOLO DO ISDOCOTORA FORMULA ILMIT L. COMMOTOS VALLO NID - DO COCACOS. MILIO MOSSO	abie avinou represents debit to water measured ducing the first MAS interval Note. Crantile backill material will be excavated from the billo								

ARCADIS Design & Consultant of the Consultant of **Temporary Backfill Log** Sheet: 10 13 Surface Elevation: 466.3 ft amsl 04/25/2019 Well ID: RB-3 Pilot Date Completed: <u>05/07/2019</u> Northing (NAD83): 2103172.5 Drilling Co.: <u>Cascade</u> Easting (NAD83): 7616213.0 Client: PG&E Drilling Method: Sonic Drilling Total Depth: Project: Final GW Remedy Phase I 245 ft bgs Driller Name: Dan O'Mara Borehole Diameter: 6-12 inches Location: PG&E Topock, Needles, California E. Huellmantel / J. Pacheco Depth to First Water: 11.35 ft bgs Drilling Asst: **Gantt Jeffers Grant Willford** Project Number: RC000753.0051 Logger: Editor: Geologic Formation USCS Class USCS Depth (ft) Groundwater Calculated Material Volumes Well Construction Sample ID Material Volumes Installed _181_ RB-3-VAS-182 180-185 (<0.033 U <0.033 U) 4/29/2019 _183_ 15:38 184 185 Topock -Weathered ML_186_ Bedrock conglomerate 187. _188_ 189 (4.5 - 210.0') Cemex (4.0 - 245.0') 6" (4.5 - 210.0') 80.7 (4.5 - 210.0') 94 bags (16%) 190 #3 MESH (8x10) Borehole Note: Lapis Lustre Sand 191 192 193 Topock -Weathered Bedrock conglomerate _195_ 196 197 Topock -Weathered 198 Bedrock conalomerate _199_ Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW =

Temporary Backfill Log Sheet: 13 Surface Elevation: 466.3 ft amsl 04/25/2019 Well ID: RB-3 Pilot Date Completed: <u>05/07/2019</u> Northing (NAD83): 2103172.5 Drilling Co.: Cascade Easting (NAD83): 7616213.0 Client: PG&E Drilling Method: Sonic Drilling Total Depth: Project: Final GW Remedy Phase I 245 ft bgs Driller Name: Dan O'Mara Borehole Diameter: 6-12 inches Location: PG&E Topock, Needles, California Drilling Asst: E. Huellmantel / J. Pacheco Depth to First Water: 11.35 ft bgs **Gantt Jeffers Grant Willford** Project Number: RC000753.0051 Logger: Editor: Geologic Formation USCS Class USCS Depth (ft) Groundwater Calculated Material Volumes Well Construction Sample ID Material Volumes Installed .201. 202 203 204 (4.5 - 210.0') Cemex (4.5 - 210.0') 80.7 (4.5 - 210.0') 94 bags (16%) 205 #3 MESH (8x10) bags Note: Lapis Lustre Sand Topock -_206_ . Weathered ML Bedrock conglomerate 207 RB-3-VAS-205-210 (<0.17 U) 4/30/2019 208 209 (4.0 - 245.0') 6" 210 Borehole 212 Topock -(210.0 - 221.0') (210.0 - 221.0') 4.3 (210.0 - 221.0') 5 bags (16%) 215 Weathered Indicator Sand Note: Wildcat Washed Plastering bags Bedrock conglomerate 216 217 218 Topock -Weathered 219 ML Bedrock conglomerate Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW =

Topock - Weathered Bedrock - Conglomerate MIL c	ARCA	DIS Design & C for natura built asset	Consultancy Land es		Temporary E	Backfill Log	S	heet: 12 of 13
Total Depth: 245 ft bgs Project: Elna GW Remedy Phase Location: PG&E Topock, Needles, Califorgraph (Phase) Cantil Leffers. Be Grantwich Start Leffers. Be Grant	Date Completed:	05/07/2019			Northing (NAD83):	2103172.5		
Service Serv								
Second S	-	-]		-	-		-
Cant Jeffers Editor: Crant Willford Project Number RC000753.0051			tol / I	Dachaca			Location: PG&E	: Topock, Needles, Calilori
Calculation Calculation Calculation Material Volumes Material Volumes Protein Calculation Material Volumes Protein Calculation Material Volumes Protein Calculation Calcul	-			<u> Facileco</u>	-		Project Number	PC000753 0051
	ogger.		•		_ Luitor.	Giant Willioid	Floject Number	. 10000733.0031
Indicator Sand Indi	Groundwate Sample ID	Geologic Formatio	USCS	USCS	Well	Construction		
		Weathered Bedrock -	ML					(210.0 - 221.0') 5 bags (16%) Note: Wildcat Washed Plastering
236_ 		Weathered Bedrock -	SM		(221.0 - 245.0') Bentonite seal chips			(221.0 - 245.0') 7.5 bags (15%) Note: Puregold Medium Chips
Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, GW =								
·		SCS - Unifica	1 8011 (Classificat	tion System ft - feet	has = helow around ourfo	ce amel = above ma	ean sea leval CIM -
poundwater, ppp – parts per billion, ϕ – not detected above the laboratory reporting limit, σ - estimated value, $\eta \kappa$ = no recovery. Dide water						<u> </u>		
able symbol represents depth to water measured during the first VAS interval Note: Granule backfill material will be excavated from the pilot		ı – paπs per t	niion,					

