9	<u> </u>	<u>C</u>	<u>\D</u>	IS		Bc	pring	g Log		She	eet: 1 of	8
Date S	tarted:		03/31	/2022		Surface			Bor	ng No.:	ER-1	
	omple					Northin						
Drilling Drilling	Co.: Metho			<u>IOVIN</u> Drilling		Easting Total D		83): <u>7616510.53</u> <u>143.1 ft bgs</u>	Client: Project	PG&E	W Remedy Pr	250 24
-	g Type			Sonic Truck		Boreho	•	•	•		Topock, Need	
	Name:			Ramos				Water: 80.5 ft bgs		n. <u>r out</u>		
Drilling				ndelaria / F. P		Sampli			re Barrel Project	Number:	30126255	
_ogge	r:		Grant	Willford		Sampli	ng Inte	erval: <u>Continuous</u>				
Editor:			Sean	McGrane		Conver	ted to	Well: 🛛 Yes 🗌 No				
Depth (ft)	Recovery (ft)		ieve iple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil [	Description		Drilling Notes	Drilling Fluid
 1 					Alluvium Deposits	SM		(0-2 ft) Silty sand with gravel (S fine to coarse, angular to subro to subround; little small cobbles very large pebbles, angular to s dry.	und; little silt; little granule s, angular to subround; litt	s, angular e small to	(0.0 - 4.5') Air-knifed for utility clearance refusal at approximately	(0.0 - 4.5') No drilling flui used
_ 2 _ 3 _ 4	4.5				Alluvium Deposits	SM		(2-4.5 ft) Silty sand with gravel if fine to very coarse, angular to s pebbles, angular to subround; I to subround; little silt; little gran clay; poorly sorted; dry; coarser lithology.	ubround; little small to ver ittle small to large cobbles ules, angular to subround	y large , angular trace	4.5 ft bgs due to encountering bedrock. Logged from air-knife cuttings.	
_ 5 _ 6	0					NR		(4.5-7 ft) No Recovery.			(4.5 - 20.0') Advancing 12 inch conductor casing 4.5-20 ft bgs (5.0 - 7.0') Core fell out of core barrel	(4.5 - 20.0') 600 gallons of water used 500 gallons of water recovered; 10 gallons of water lost
_ 7 _ 8 _ 9				No			/ × × × × × × × × × × × × × × × × × × ×	(7-36 ft) Sedimentary Rock - C 5/4); microcrystalline to coarse hard; massive; some competen inches in length; moderately to sample appeared mostly pulver	grained, angular; highly w t rock fragments observed highly friable; dry; NOTE:	eathered; , 1-2.5	(7.0 - 15.0') (7.0 drilling	
_10 _11 _12	8	No S Sam Colle	ples	Groundwater Samples Collected			****					
_13 _14 _14 _15					Weathered Bedrock - conglomerat	N/A	× × × × × × × × × × × × × × × × × × ×					
  	2						× × × × × × × × × × × × × × × × × × ×				(15.0 - 17.0') Rough drilling	
18 18 19	5						× × × × × × × × × × × × × × × × × × ×				(17.0 - 22.0') Very rough drilling	
20	iations	. 110	- 27	Inified Soil (		Svetor	$  \times \times \times \\ \times \times \times \\ n \text{ ft} =$	feet, bgs = below ground s	surface amel - abou	a mean co		
						-		d hollow blue water table r				
								ment, respectively. Appare			· • ·	
				s in the core b				,			polo	

A	AR	C۵	D	S		Bo	pring	g Log	g		She	eet: 2 of	8
Date S	started:	0	3/31/	2022		Surfac	e Eleva	ation:	504.57 ft amsl	- Borir		<u>ER-1</u>	
	omple	ted: <u>0</u>	4/20/	2022		Northir			2101089.85	_ L	-		
Drilling				IOVIN		Easting		983):	7616510.53	_ Client:	PG&E		
-	Metho			Drilling		Total D	•		<u>143.1 ft bgs</u>	Project:		W Remedy P	
	д Туре			Sonic Truck I		Boreho			10-12 inches	_ Location:	<u>PG&amp;E</u> -	Topock, Need	lles California
	Name:	_		Ramos		-			80.5 ft bgs		<u> </u>		
Drilling				<u>delaria / F. P</u>		Sampli	-		7 inch x 10 ft. Core Barrel	_ Project N	umber:	30126255	
Logge				Willford		Sampli	-		Continuous	_			
Editor:		2	ean r	<u>McGrane</u>		Conve		vveii:	X Yes No				
Depth (ft)	Recovery (ft)	Sie Samp		Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
21 22	5						× × × × × × × × × × × × × × × × × × ×	5/4); mid hard; ma inches i sample (22 ft) C	Sedimentary Rock - Conglomerate; crocrystalline to coarse grained, ang assive; some competent rock fragme n length; moderately to highly friable appeared mostly pulverized drilling p observed some competent rock fragm onglomerate.	ular; highly wea ents observed, dry; NOTE: Co rocess.	ithered; I-2.5 pre	(22.0 - 27.0') Very rough	(22.0 - 27.0') No drilling flui
23 24 25 25 26	5										<b>r</b>	drilling	used
27 28 29 29	5	No Si	eve	No	Weathered Bedrock - conglomerat	N/A	× × × × × × × × × × × × × × × × × × ×					(27.0 - 32.0') Rough drilling	(27.0 - 32.0') No drilling flui used
_30 _31 _32		Samp Collec	les	Groundwater Samples Collected			× × × × × × × × × × × × × × × × × × ×					(30.0') 10-inch diameter drill casing became locked up. Advanced	(30.0') No drilling flu used
33 34 34 35	5						****					12-inch diameter conductor casing to free the 10-inch drill casing. (32.0 - 36.0') Rough drilling	(32.0 - 36.0' No drilling flu used
36 37							× × × × × ×	(36-57 f 5/4); mid some co less fria	t) Sedimentary Rock - Conglomerate crocrystalline to coarse grained, ang ompetent rock fragments observed, 1 ble and more difficult to break; some	ular; hard; mas to 3 inches in friable rock fra	sive; length; gments	(36.0 - 37.0') Very rough drilling; drill rate slowed	(36.0 - 37.0') No drilling flui used (37.0 - 42.0')
_38 _38 _39 _40	5				Competent Bedrock - conglomerat	N/A		appeare	e competent rock observed; dry; NO d mostly pulverized drilling process.	I E: Core samp	NE	significantly. (37.0 - 42.0') Drilling conditions changed from rough to normal at discrete depths	No drilling flu used
40 \bbrev	/iations	: USC	CS = l	Jnified Soil C	lassificatior	ו Syster		feet, ba	s = below ground surface, an	nsl = above	mean se	a level, NR =	No Recove
									v blue water table marks repr				
		•	-	<u> </u>					espectively. Apparent partial r				
			• •	in the core b			٩	, 1	, <u>, , , , , , , , , , , , , , , , , , </u>				

9	<u> </u>	<u>20</u>	<u>ADI</u>	S		Bo	pring	g Log	9			She	et: 3 of	8
Date S	Started		03/31/	2022		Surfac			504.57 ft amsl		Borin	q No.:	<u>ER-1</u>	
		ted:	04/20/			Northir			2101089.85		_	-		
Drilling		l.	ABC L			Easting		983):	7616510.53			PG&E		
	i Metho g Type			<u>Drilling</u> Sonic Truck I		Total D Boreho	•	motor:	<u>143.1 ft bgs</u> <u>10-12 inches</u>		-		<u>N Remedy Pr Fopock, Need</u>	
	Name:			Ramos					80.5 ft bgs			FORE	i opock, ineeu	
	Asst:			idelaria / F. P		Sampli			7 inch x 10 ft. Cc	ore Barrel	Proiect N	umber: 3	30126255	
_ogge				Willford		Sampli	-		Continuous					
Editor:			Sean I	McGrane		Conve	-		🛛 Yes 🗌 No		_			
Depth (ft)	Recovery (ft)		Sieve nple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil	Description			Drilling Notes	Drilling Fluid
 41 	5						× × × × × × × × × × × × × × × × × × ×	5/4); mid some co less fria within th appeare	) Sedimentary Rock - rocrystalline to coarse mpetent rock fragmer ole and more difficult t e competent rock obs d mostly pulverized dr	e grained, angul its observed, 1 t o break; some f erved; dry; NOT	ar; hard; mass to 3 inches in l riable rock frag	ive; ength; gments	throughout drill run.	
43 44 44 45 46 47	5	San	Sieve nples ected						01	2			(42.0 - 57.0') Normal drilling conditions; very rough drilling at discrete depths.	(42.0 - 57.0' No drilling flu used
48 49 50 51	4.5			No Groundwater Samples Collected	Competent Bedrock - conglomerat	N/A								
_52_							$\begin{vmatrix} \times & \times & \times \\ \times & \times & \times \\ \times & \times & \times \\ \times & \times &$							
_53_		FR. 1	SS-47-											
		6	57 2022				$  \times \times$							
_54			:38				× × × × × × × × ×							
	5						$  \times \times$							
_55														
							$  \times \times$							
_56							$  \times \times$							
							× × × × × × × × ×							
_57_								(57-74 ft	) Sedimentary Rock -				(57.0 - 62.0')	(57.0 - 62.0'
58  59	5				Weathered Bedrock - conglomerat	N/A	(	5/4); mid hard; ma inches in sample	rocrystalline to coarse issive; some compete i length; moderately to appeared mostly pulve	nt rock fragmen highly friable; c	its observed, 1 dry; NOTE: Co	-2.5	Smooth drilling	No drilling flu used
<u>60</u> Abbre	viations	s: US	SCS = I	■ Unified Soil C	lassificatior	ı Syster	$\times \times \times$		s = below ground	surface, am	sl = above r	nean sea	⊥ a level, NR = N	No Recover
									blue water table					
				-					spectively. Appar				<u>, ,</u>	
omna	action o	of sec	liments	in the core b	ag.									

ARC		-				g Lo			One	eet: 4 of	8
Date Started:	03/31/2			Surfac			504.57 ft amsl	- Boring	No.:	ER-1	
Date Completed:				Northir			2101089.85				
Drilling Co.:	ABCL			Easting		083):	7616510.53		PG&E		•
Drilling Method:	Sonic I	•		Total D	•		<u>143.1 ft bgs</u>	•		W Remedy Pl	
Drill Rig Type:		<u>Sonic Truck N</u>		Boreho			<u>10-12 inches</u>	Location: <u>I</u>	G&E	Topock, Need	les Californ
Driller Name:	Eddie I			•			80.5 ft bgs			20120255	
Drilling Asst:		<u>delaria / F. Pe</u> Atilifard		Sampli	-		7 inch x 10 ft. Core Barrel	Project Nu	mber:	30126255	
.ogger: Editor:	<u>Grant \</u>	/villiord //cGrane		Sampli Convei	-		Continuous     X   Yes   No				
	Sean					vveii.					
	Sieve mple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
_615 62					× × × × × × × × × × × × × × × × × × ×	5/4); mid hard; ma inches i sample	t) Sedimentary Rock - Conglomerate crocrystalline to coarse grained, ang assive; some competent rock fragm i length; moderately to highly friable appeared mostly pulverized drilling	ular; highly weath ents observed, 1-2 ; dry; NOTE: Core	ered; 2.5	(62.0 - 67.0')	(62.0 - 67.0
4/5	-SS-47- 67 /2022 1:38		Weathered							Smooth drilling	No drilling flu used
	-SS-67- 87 //2022	No Groundwater Samples Collected	Weathered Bedrock - conglomerat	N/A	× × × × × × × × × × × × × × × × × × ×					(67.0 - 74.0') Smooth drilling	(67.0 - 74.0 No drilling flu used
 	2:05		Competent		× × × × × × × × × × × × × × × × × × ×	(74-81 f 5/4); mid compete to break observe drilling p	t) Sedimentary Rock - Conglomeratic crocrystalline to coarse grained, and ent rock fragments observed, 1-3 ind ; some friable rock fragments within d; dry; NOTE: Core sample appeare process.	ular; massive; so thes in length; diff the competent ro	me icult ck	(74.0 - 77.0') Rough drilling	(74.0 - 77.0 No drilling flu used
-77 _785 _79 _80			Bedrock - conglomerat	N/A	× × × × × × × × × × × × × × × × × × ×					(77.0 - 97.0') Rough drilling	(77.0 - 97.0 No drilling flu used
				-	n, ft =	feet, bg	s = below ground surface, a v blue water table marks rep				

9	AR	$\mathbb{C}$	١D	S				g Log		Sh	eet: 5 of	8
	tarted:		03/31/2			Surfac			Borin	a No.:	<u>ER-1</u>	
	•		04/20/2			Northir	•		_			
-	Co.:		ABC L	IOVIN		Easting	g (NAE	983): <u>7616510.53</u>	_ Client:	PG&E		
illing	Metho	od: <u>3</u>	Sonic [	Drilling		Total D	epth:	<u>143.1 ft bgs</u>	Project:	Final G	<u>W Remedy Pł</u>	nase 2A
ill Riq	ј Туре	: :	Terra S	Sonic Truck N	Nount	Boreho	ole Dia	meter: <u>10-12 inches</u>	_ Location:	PG&E	Topock, Need	les Califor
iller l	Name:	ļ	Eddie F	Ramos		Depth	to First	Water: <u>80.5 ft bgs</u>	_			
illing	Asst:	2	J. Can	delaria / F. P	erez	Sampli	ng Me	thod: <u>7 inch x 10 ft. Core Barrel</u>	Project N	umber:	30126255	
ggei	:			Nillford		Sampli	ng Inte		_			
litor:		5	Sean N	/IcGrane		Conve	ted to	Well: 🗵 Yes 🗌 No				
	Recovery (ft)		eve ple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Flu
_ 31	5				Competent Bedrock - conglomerate	N/A				3	r	
-	5				Competent Bedrock -	N/A						
32					conglomerate	e	× × × × × × × × ×	(82.5-97 ft) Sedimentary Rock - Conglomerat	e <sup>:</sup> reddish brov	/n		
33_		ER-1-5						(2.5YR 5/4); microcrystalline to coarse graine massive; some competent rock fragments ob	ed, a <mark>ngular;</mark> har	d;		
		87 4/5/2	2022				$  \times \times$	length, difficult to break; some friable rock fra	gments within	the		
34		12:	05					competent rock observed; dry; NOTE: Core a mostly pulverized drilling process.	ppeareu samp	C		
-	5											
85												
-												
36												
,							$  \times \times$					
37_							$  \times \times$					
-												
88_												
_ +							$  \times \times$					
89_												
_ +	5			No	Competent Bedrock -	N/A						
90_				Groundwater Samples	conglomerate		X X X					
				Collected			$  \times \times$					
91_												
		ER-1-5					$  \times \times$					
92_		91 4/5/2	2022					(32-37 it) Congromerate becoming more com	petent, increas	e in the		
_ +		12:	58					size of the rock fragments 2-4 inches.				
93_							$  \times \times$					
							$  \times \times$					
94												
_	5											
95												
_												
96							$  \times \times$					
_ +							$  \times \times$					
97_					F	·	$\times \times \times$	(97-99.5 ft) No Recovery. NOTE: See drilling	notes.		(97.0 - 102.0')	(97.0 - 102
, <sup>–</sup>							$  \rangle /$				Top 2.5 ft of drill cuttings	No drilling f used
98		No S				NR					washed out of core barrel	
<u> </u>	2.5	Sam Colle	ples				/				during	
99		Jone	5100				$ / \rangle$				extraction.	
-						 N/A		╄───────────				
00 brev	iations	. 119	CS = 1	Inified Soil C	lassification			l feet, bgs = below ground surface, am	isl = ahove r	nean se	alevel NR - I	No Recov
								d hollow blue water table marks repre				
								ment, respectively. Apparent partial re			<u>, , ,</u>	
nna							uiup					

ARC	AD	S		Bo	oring	g Log	9		Sh	eet: 6 of	8
Date Started:	03/31/	2022		Surfac			504.57 ft amsl	- Borin	g No.:	<u>ER-1</u>	
Date Completed:				Northin			2101089.85	_ L	_		
Drilling Co.: Drilling Method:	<u>ABC L</u> Sonic			Easting Total D		83):	7616510.53 143.1 ft bgs	_ Client: _ Project:	PG&E	W Remedy Pl	2260 24
Drill Rig Type:		Sonic Truck N		Boreho	•	neter <sup>.</sup>	<u>10-12 inches</u>	•		Topock, Need	
Driller Name:		Ramos					80.5 ft bgs			<u> </u>	
Drilling Asst:	<u>J. Can</u>	delaria / F. Pe	erez	Sampli	ng Met	thod:	7 inch x 10 ft. Core Barrel	_ Project N	umber:	30126255	
_ogger:		Willford		Sampli	-		Continuous	_			
Editor:	<u>Sean I</u>	<u>McGrane</u>		Conve	rted to	Well:	X Yes No				
Cepth (ft) (ft) (ft) (ft)	Sieve ample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
	Sieve mples llected	No Groundwater Samples Collected	Competen Bedrock - conglomera	te N/A	x x x x x x x x x x x x x x x x x x x	(2.5YR & massive length; compete sample a	3.1 ft) Sedimentary Rock - Conglom i/4); microcrystalline to coarse grain is ome competent rock fragments of ifficult to break; some friable rock fra appeared mostly pulverized drilling p int rock observed; rock fragments me appeared mostly pulverized drilling p is a below ground surface, an	ed, angular; hai pserved, 1-3 ind agments within pist to dry; NOT rocess.	rd; the E: Core	(102.0 - 122.0') Relatively normal drilling, rough in discrete intervals.	(102.0 - 122.0') No drilling flui used
							blue water table marks repre				
		-					spectively. Apparent partial r	-		· • ·	
		in the core b					· · · ·			•	

ARC	ADI	S		Bo	oring	g Log	]			She	et: 7 of	8
Date Started:	03/31/	2022		Surfac			504.57 ft amsl		Boring N	lo.:	ER-1	
Date Completed:				Northir			2101089.85					
Drilling Co.:	<u>ABC L</u> Sonia			Easting		83):	7616510.53		Client: <u>PG</u>		N Domodu D	2000 24
Drilling Method: Drill Rig Type:	<u>Sonic</u>	Drilling Sonic Truck N		Total D Boreho	•	notor <sup>.</sup>	<u>143.1 ft bgs</u> <u>10-12 inches</u>		Project: <u>Fina</u> Location: <u>PG</u>		V Remedy Pl	
Driller Name:		Ramos					80.5 ft bgs		Location. <u>I G</u>			
Drilling Asst:		delaria / F. Pe	erez	Sampli			7 inch x 10 ft. Core	Barrel	Project Numb	er: 3	30126255	
_ogger:		Willford		Sampli	-		Continuous		,			
Editor:	<u>Sean I</u>	McGrane		Conve	-		🛛 Yes 🗌 No					
42 02	Sieve mple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil De	scription			Drilling Notes	Drilling Fluid
_130_  Sa	Sieve mples lected	No Groundwater Samples Collected	Competen Bedrock - conglomera	N/A	x x x x x x x x x x x x x x x x x x x	(2.5YR 4 massive length; cc compete sample	3.1 ft) Sedimentary Rock i/4); microcrystalline to c ; some competent rock fr ifficult to break; some fria int rock observed; rock fr appeared mostly pulveriz	oarse grained agments obs able rock frag agments mois	, angular; hard; erved, 1-3 inches i ments within the it to dry; NOTE: Co	n	(122.0 - 127.0') Very rough drilling drilling; rough drilling; rough drilling; rough drilling; rough drilling; rough drilling; rough drilling discrete intervals.	(122.0 - 127.0') No drilling flu used (127.0 - 137.0') No drilling flu used (137.0 - 143.0') No drilling flu used
							s = below ground su blue water table ma					
N/A – NOLAPPIIC		-							-		· • • ·	
luring drilling and	annroy									םחז נ	regult of poto	

9	AR	CAD	S		Bo	oring	j Log		She	et: 8 of	8
Date S	started:	03/31/	2022	;	Surface	e Eleva	tion: <u>504.57 ft amsl</u>	Borin	g No.:	FR-1	
Date C	comple	ted: <u>04/20/</u>	2022		Northin	g (NAI	D83): <u>2101089.85</u>		3		
Drilling	Co.:	<u>ABC L</u>	IOVIN		Easting	(NAD	83): 7616510.53	Client:	PG&E		
Drilling	Metho	od: <u>Sonic</u>	Drilling		Total D	epth:	<u>143.1 ft bgs</u>	Project:	Final GV	V Remedy Pl	nase 2A
Drill Ri			Sonic Truck N		Boreho	•	-	-		opock, Need	
Driller			Ramos		Depth t	to First	Water: 80.5 ft bgs			•	
Drilling			delaria / F. Pe		Samplii		-	Project N	umber: 3	30126255	
Logge			Willford		Samplii	-			-		
Editor:			McGrane		Conver	-					
МРГА				0 5							
Depth (ft)	Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
141 141 142	6	No Sieve Samples Collected	No Groundwater Samples Collected	Competent Bedrock - conglomerate	N/A	****	(99.5-143.1 ft) Sedimentary Rock - Conglomera (2.5YR 5/4); microcrystalline to coarse grained, massive; some competent rock fragments obse length; difficult to break; some friable rock frag competent rock observed; rock fragments mois sample appeared mostly pulverized drilling pro	, angular; hai erved, 1-3 inc ments within st to dry; NOT	rd; hes in the		
143						× × × × × × × × ×	End of Boring at 143.1 ft bgs.				
144											
146											
148						C					
149 						$\mathbf{\lambda}$					
					C	0					
				$\bigcirc$							
152											
153_											
154											
158											
3 <u>160</u>	liation	· 11808 - 1	Inified Seil C	accification	Suntar	n ft	foot has - holow around surface				
-							feet, bgs = below ground surface, ams				
5		-	-				d hollow blue water table marks repres ment, respectively. Apparent partial rec				
	-		in the core b		unny d	evelop	теп, тезрестиен. Аррагент ранан гес	Jovenies Ca		result of pole	IIIIAI
pompa	ເບເບເເ	ก ออนแบยเปร		ay.							

ARC	ADIS			Well Const	ruction Log		Sheet: 1 of 8
Date Started:	04/20/2022			Surface Elevation:	504.57 ft amsl	- Well ID: El	R-1
Date Completed					503.83 ft amsl		
Drilling Co.:	ABC LIOVIN			Deep Well Elevation:	<u>N/A</u>	Client: <u>PG&amp;</u>	
Drilling Method:	Sonic Drilling			Northing (NAD83):	2101089.85	-	GW Remedy Phase 2A
Driller Name:	Eddie Ramos			Easting (NAD83):	<u>7616510.53</u>	Location: <u>PG&amp;</u>	E Topock, Needles Californi
Drilling Asst:	J. Candelaria Grant Willford			Borehole Diameter: Static Water Level:	10-12 inches See Log for Depths	Project Numbe	or: 20126255
.ogger: Editor:	Sean McGrar			Development End Date:	÷ .		FI. <u>50120255</u>
otal Depth:	143.1 ft bgs			Well Completion:	✓ Flush Stick-up	To Be Completed	d in Well Vault
Groundwa (t) Sample II		USCS Code	Class	Construe	ction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volume
 _ 1  _ 2	Alluvium Deposits	SM		(0.0 - 1.0') Temporary Surface Completion (1.0 - 2.0') Cemex #2/16 (16x30) Lapis Lustre	(0.0 - 20.0') 12" Diameter Borehole	<u></u>	(0.0 - 1.0') 7 bags Note: 2.5 x 2.5 ft. concrete pad with 18 inch diameter lockable vault, High Sped 4,500 PSI Concrete. Note: Cemex #2/16 Lapis Lustre Sand extended into skirt of vault.
	Alluvium Deposits	SM		(0.7 - 45.3') 6" Sch. 80 PVC Casing (2.0 - 5.7') Native Material			Note: Native material used to bac fill was from the SPY.
_ 5 - 6 - 7 - 8 - 8 - 9			********				
No - 10 - Groundwate Samples - 11 - Collected - 11 - 12 - 13 - 14 	r Weathered Bedrock - conglomerate	N/A ××	× × × × × × × × × × × × × × × × × × ×	(5.7 - 39.0') Portland Cement 5% Bentonite Type I, II, and V with Hydrogel		(5.7 - 39.0') 116.1 Gallons	(5.7 - 39.0') 150 Gallons (129%) Note: Used >20% of the calculate volume due to potential voids tha formed during drilling.
- 15 		× × × × × × × × × × × × × × × × × × ×	x x				
<u>20</u> bbreviations: L	SCS = Unified	×	X X	on System, ft = feet, bgs	= below ground surface, ar	nsl = above mean	sea level, SS = Stainless
							arks represent depth to wat
	-			<del>.</del>	c measured during drilling, i		•

ARC	ADIS		Well Cons	truction Log		Sheet: 2 of 8
ate Started: ate Completed:	04/20/2022		Surface Elevation: Shallow Well Elevatior	504.57 ft amsl	Well ID: E	R-1
rilling Co.:	ABC LIOVIN		Deep Well Elevation:	N/A	Client: <u>PG</u>	&E
rilling Method:	Sonic Drilling		Northing (NAD83):	<u>2101089.85</u>	Project: <u>Fina</u>	al GW Remedy Phase 2A
riller Name:	Eddie Ramos		Easting (NAD83):	7616510.53	Location: <u>PG</u>	<u>&amp;E Topock, Needles Californ</u>
rilling Asst:	<u>J. Candelaria</u>		Borehole Diameter:	<u>10-12 inches</u>		
ogger:	Grant Willford		Static Water Level:	See Log for Depths	Project Numb	er: <u>30126255</u>
ditor:	Sean McGran	le	Development End Dat			
otal Depth:	<u>143.1 ft bgs</u>		Well Completion:	✓ Flush Stick-up	To Be Complete	ed in Well Vault
Groundwat		USCS USCS USCS	50000 20000		Calculated Material Volumes	Material Volumes Installed Note: percentages are the actu volume vs the calculated volum
.21 .22 .23 .24 .25 .26 .27 .28 .29 .29 .30 Groundwate Samples Collected .31 .32 .33 .33 .34 .35 .36 .37 .38 .39	Veathered Bedrock - conglomerate	N/A	(5.7 - 39.0') Portland Cement 5% Bentonite Type I, II, and V with Hydrogel	(20.0 - 143.1')* Diameter Borehole	(5.7 - 39.0') 116.1 Gallons	(5.7 - 39.0') 150 Gallons (1299 Note: Used >20% of the calcular volume due to potential voids th formed during drilling.
4		I IA A			(39.0 - 43.4') 3.5 bags	(39.0 - 43.4') 3 bags (86%)
40						
			ication System, ft = feet, bg			n sea level, SS = Stainless narks represent depth to wa
			able tavy = oroundwater i	NOTES SOLID DILLE AND NOTION	v olue waler table r	nanks represent debth to Wa'

ale Completed 05/10/2022 Shallow Well Elevation: 503.83.4.msal UWin D. EKY  illing Asst Galaxia Charles Soric Dalling Karat Landelaha II. Perez Borehole Dameter: 10.12 Inches  gger: Grant Willord Static Well Evention: See Log for Deptits  Project Final GW Remedy Phase 2A Location: PG&E  project Number 30126255 Location: PG&E  project Number 3012625 Location: PG&E  project Number 30126 Location: PG&E  project Number 3	ARC	ADIS			Well Const	ruction Log		Sheet: 3 of 8
tie Completed: 05/10/2022 Shallow Well Elevation: 503.83 transi United Completed: 05/10/2022 State CLOVIN. Deep Well Elevation: 2010/89.85 Project: Final GW Remody Phase 2A Project: Final GW Remody Phase 2A Project: Final GW Remody Phase 2A Generating Association (ADR3): 710/1010 (ADR3):	ate Started:	04/20/2022			_Surface Elevation:	504.57 ft amsl	Well ID: EF	R-1
Illing Merhod:       Sonic Defiling       Northing (NAD83):       210108.85       Project:       Enalty (NAD83):         Illing Asst:       J.Candelatia / E.Parsz       Borehole Diameter:       10.12 Inches       Project:       Final Control (NAD83):         Igger:       Grand Willord       Static Water Level:       See Log for Degths       Project Kind Control (NAD83):       Development End Date:       Project Kind Control (NAD83):         Idlo Port:       1d3.11 fbgs       Well Completion:       Sind (Nater Level:       See Log for Degths       Project Number; 20126255         Idlo Port:       1d3.11 fbgs       Well Completion:       Construction Deals       Catelabelia       Method Woll Valut Level:         See Log for Control (Nater Level:       See Log for Degths       To Be Completed in Woll Valut Level:       Note the catelabelia         41       -	ate Completed:	05/10/2022			_Shallow Well Elevation:	503.83 ft amsl		· ·
tiler Name: Eddie Ramos. Easting (NAD83): 7616510.53 Location: PO26E Topock, Needles Calif. Sing Asst: J. Candelaria / F. Perzz Borehoe Diameter: 10-12 Inches. Frain McGrane Development End Date: 01/2022 Construction Details Static Water Level: See Log for Depths. Project Number: 30126255 Development End Date: 01/2022 Construction Details Calculated See Completed in Well Vaut Construction Details Calculated Material Volume Methanis as the is- water with calculated vi- water with calculated vi- sing Calculated vi- See Completed in Well Vaut Construction Details Calculated vi- de Completed in Well Vaut Construction Details Calculated vi- See Completed in Well Vaut Construction Details Calculated vi- de Completed in Well Vaut Calculated vi- de Completed in Well Vaut Construction Details Calculated vi- Construction Details Calculated Vi- C	rilling Co.:	ABC LIOVIN			_Deep Well Elevation:	<u>N/A</u>	Client: PG&I	Ξ
Ning Asst:       J. Candelating / F. Perez       Boothole Diameter:       10-12 Inches         Project Number:       State Wilford       State Moderane       Project Number:       20126255         Into:       State Moderane       Development End Date:       6/1/2022       To Be Completed in Well Valut         Into:       State Moderane       Development End Date:       6/1/2022       To Be Completed in Well Valut         Into:       State Moderane       Well Completion:       X3 Flueth    Stateway       To Be Completed in Well Valut         Into:       State Moderane       Material Values       Moderane       Material Values       Material Values         Into:       State Moderane       Into:	rilling Method:	•			_Northing (NAD83):		-	•
gger: Grant WilfordStatic Water Level: See Log for DepthsProject Number: 30126255					,		Location: <u>PG&amp;I</u>	E Topock, Needles Californ
Inter         Sean McGrane         Development End Date:         Grundvalue         To Be Completed in Well Valut           Isal Dopti:         143.11 ft/gs         Well Completion:         Image: Status in the	-		F. Pere	ez				
Idal Depth:       13.1 ft Dgs.       Well Completion:       Number of the state of the sta	ogger:					•	Project Numbe	r: <u>30126255</u>
E     Grundwater Sample ID     B     Fg.g.g.g.g.g.g.g.g.g.g.g.g.g.g.g.g.g.g.			е					
1         1         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 2)         (10, 1-43, 1)         (					•	•		
42       (30.0-43.4)         43       (30.0-43.4)         44       (30.0-34.4)         44       (30.0-34.4)         45       (43.4-44.0)         66       (43.4-34.7)         67       (65.3-136.7)         61       (61.0-143.1)         62       (61.0-143.1)         78 bags       (44.0-143.1)         79 bags       (44.0-143.1)         79 bags       (44.0-143.1)         79 bags       (44.0-143.1)         71 bags       (44.0-143.1)         72 bags       (44.0-143.1)         72 bags       (44.0-143.1)<		Geologi Formatic						Material Volumes Installed Note: percentages are the actu volume vs the calculated volume
47 - 48 - 49 - 50 - 50 - 50 - 50 - 50 - 50 - 50 - 5	41  42 43			X X X	6" Sch. 80 PVC (40.5 - 41.5') SS Centralizer (39.0 - 43.4') Cemex #0/30 (30x50) Lapis Lustre			(39.0 - 43.4') 3 bags (86%)
47 - 48 - 49 - 50 - 50 - 50 - 50 - 50 - 50 - 50 - 5				× × × × × × × × ×	Enviroplug Medium —			(43.4 - 44.0') 0.5 bags (167%) Note: Hydrated bentonite with
47 - 48 - 49 - 50 - 50 - 50 - 50 - 50 - 50 - 50 - 5	44  45			× × × × × × × × × × × × × × × ×			U. J bags	approximately 5 gallons of free water. Used >20% of the calculated volume due to poten voids that formed during drillin
58       Weathered       N/A       X X X X         59       Sedrock - conglomerate       N/A       X X X X         60       N/A       X X X X         observiations:       USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, SS = Stainless	.50 Groundwate Samples	Bedrock - conglomerate	N/A	x x x x x x x x x x x x x x x x x x x	6" 0.02-Slot 316L SS Wire Wrap Screen (44.0 - 143.1') Cemex #2/16 (16x30) Lapis Lustre			(44.0 - 143.1') 85.5 bags (107' Note: Filter pack swabbed fo approximately 5 minutes in 20 lifts for a total of approximately minutes prior to the installation the well seal.
	58 59 60	Bedrock - conglomerate	N/A	× × × × × ×				
eal, NR – NO Necovery, N/A – Not Applicable, GVV – groundwater, Notes, solid blue and nollow blue water table marks represent depth to V					· · · · ·			
bgs.) static water measured post development and approximate static measured during drilling, respectively.		-		-	<del>.</del>			arks represent depth to wa

ARC	ADIS			Well Const	ruction Log		Sheet: 4 of 8
ate Started:	04/20/2022			_Surface Elevation:	504.57 ft amsl	Well ID: Ef	R-1
ate Completed:	05/10/2022			_Shallow Well Elevation:	503.83 ft amsl		· · ·
illing Co.:	ABC LIOVIN			_Deep Well Elevation:	<u>N/A</u>	Client: PG&	
illing Method:	Sonic Drilling			_Northing (NAD83):	2101089.85	Project: <u>Final</u>	GW Remedy Phase 2A
iller Name:	Eddie Ramos			_Easting (NAD83):	7616510.53	Location: <u>PG&amp;</u>	<u>E Topock, Needles Califor</u>
illing Asst:	J. Candelaria	/ F. Per	ez	_Borehole Diameter:	<u>10-12 inches</u>		
gger:	Grant Willford			_Static Water Level:	See Log for Depths	Project Numbe	er: <u>30126255</u>
litor:	Sean McGran	е		_Development End Date:			
tal Depth:	<u>143.1 ft bgs</u>			_Well Completion:	× Flush Stick-up	To Be Completed	l in Well Vault
Groundwar Sample II		USCS Code	USCS Class	Constru	ction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the act volume vs the calculated volur
61 62 63 64 65 66 66 67 68 69 70 Groundwate Samples Collected 71 72 73 74 75 76 77 78 79 80	r Competent Bedrock - conglomerate	N/A	***************************************	(45.3 - 136.2') 6" 0.02-Slot 316L SS Wire Wrap Screen (44.0 - 143.1') Cemex #2/16 (16x30) Lapis Lustre Sand		(44.0 - 143.1') 79.9 bags	(44.0 - 143.1') 85.5 bags (107' Note: Filter pack swabbed fo approximately 5 minutes in 20 lifts for a total of approximately minutes prior to the installation the well seal.
	SCS = Unified	Soil Cla	$\times \times \times$	ion System, ft = feet, bgs	= below ground surface,	amsl = above mean	sea level, SS = Stainless
							arks represent depth to wa
			-	ent and approximate stati			· ·

ARC	ADIS			Well Const	ruction Log	:	Sheet: 5 of 8
ate Started:	04/20/2022			_Surface Elevation:	504.57 ft amsl	Well ID: EF	۶-1
ate Completed	l: <u>05/10/2022</u>			_Shallow Well Elevation:	<u>503.83 ft amsl</u>		<b>V-1</b>
rilling Co.:	ABC LIOVIN			_Deep Well Elevation:	<u>N/A</u>	Client: PG&I	E
rilling Method:	<u>Sonic Drilling</u>			_Northing (NAD83):	2101089.85	Project: <u>Final</u>	GW Remedy Phase 2A
riller Name:	Eddie Ramos	3		_Easting (NAD83):	7616510.53	Location: PG&I	E Topock, Needles Californ
rilling Asst:	<u>J. Candelaria</u>		rez	_Borehole Diameter:	<u>10-12 inches</u>		
ogger:	Grant Willford			_Static Water Level:	See Log for Depths	Project Numbe	r: <u>30126255</u>
ditor:	<u>Sean McGra</u>	ne		_Development End Date:			
otal Depth:	<u>143.1 ft bgs</u>	1		_Well Completion:	≍ Flush Stick-up	To Be Completed	in Well Vault
Groundwa (tf) Sample		USCS Code	USCS Class	Construc	ction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actu volume vs the calculated volum
_	Competent Bedrock -	N/A	× × × × × × × × × × × ×	(45.3 - 136.2') 6" 0.02-Slot 316L SS Wire Wrap			
.81	conglomerat	-		Screen			
	Competent Bedrock -	N/A	× × × × × × × × × × × × × × ×		F		
82	conglomerat						
33			**************************************				
			$\begin{vmatrix} x & x & x \\ x & x & x \end{vmatrix}$				
34							
35			$\begin{array}{c} \times \times \times \\ \times \times \end{array}$				
_			$  \stackrel{\times}{\times} \stackrel{\times}{\times} \stackrel{\times}{\times}  $				
36							
_			$  \times \times \times  $		H		
37			$\left \begin{array}{c} \times & \times & \times \\ \times & \times & \times \end{array}\right $		<b>H</b>		
_							
38							
_			$  \times \times \times  $				
39			$\begin{array}{c} \times & \times & \times \\ \times & \times & \times \\ \times & \times & \times \end{array}$				(44.0 - 143.1') 85.5 bags (107
No Groundwa	Competent Bedrock -	N/A	$  \times \times \times  $	(44.0 - 143.1')		(44.0 142.1')	Note: Filter pack swabbed for
Samples	conglomerat		$\begin{array}{c} \times \ \times \ \times \\ \times \ \times \ \times \\ \times \ \times \ \times \end{array}$	Cemex #2/16		(44.0 - 143.1') 79.9 bags	approximately 5 minutes in 20 lifts for a total of approximately
_ Collected				Sand			minutes prior to the installation the well seal.
91			<pre></pre>				
_			$\times \times \times$				
92			$\begin{array}{c} \times \times \times \\ \times \times \times \end{array}$				
-			× × × × × × × × × × × × × × × × × × ×				
93							
_			$\begin{array}{c} \times \times \times \\ \times \times \end{array}$				
94							
					$H \gtrsim 1$		
95			× × × × × × × × ×				
-							
96			<pre></pre>				
-			$  \times \times \times  $		H.		
97							
-			/				
98		NR	$ \vee $				
-			$  \land  $				
99			/		H		
_							
00		N/A					
				tion System, ft = feet, bgs			
	-			<del>.</del>			arks represent depth to wa
DOS.) STATIC V	ater measured	post de	evelopm	ent and approximate station	c measured during drilling	j, respectively.	

ate Started: 04/20/202 ate Completed: 05/10/202 rilling Co.: ABC LIOV rilling Method: Sonic Drilli riller Name: Eddie Ran rilling Asst: J. Candela ogger: Grant Willi ditor: Sean McG otal Depth: 143.1 ft bc Groundwater Sample ID 0 101 102 103 104 105 106 107 108 109 100 109 100 100 100 100 100	IS	Well Const	ruction Log	S	Sheet: 6 of 8
rilling Co.: ABC LIOV rilling Method: Sonic Drilli riller Name: Eddie Ran rilling Asst: J. Candela ogger: Grant Will ditor: Sean McG otal Depth: 143.1 ft bc for any line for any line for any line for any line for any line for any line for any line for any line for any line for any line for any line for any line for any line for any line for any line for any line for any line for an		_Surface Elevation:	504.57 ft amsl	Well ID: ER	2-1
rilling Method: Sonic Drill riller Name: Eddie Ram rilling Asst: J. Candela ogger: Grant Will ditor: Sean McG otal Depth: 143.1 ft bg		_Shallow Well Elevation:	503.83 ft amsl		
riller Name: Eddie Ram rilling Asst: J. Candela ogger: Grant Willi ditor: Sean McG otal Depth: 143.1 ft bc tage Groundwater Sample ID 101 102 103 104 105 106 107 108 109 110 Groundwater Sample K Collected 111 112 113 114 115 116 117 118 118		_Deep Well Elevation:	N/A	Client: <u>PG&amp;E</u>	
rilling Asst: J. Candela ogger: Grant Willt ditor: Sean McG otal Depth: 143.1 ft bc for grant Willt otal Depth: 143.1 ft bc for grant Willt for grant Wi	•	_Northing (NAD83):	2101089.85	-	GW Remedy Phase 2A
ogger:       Grant Will         ditor:       Sean McG         otal Depth:       143.1 ft bc         tio:       Groundwater         Sample ID       Seen McG         101       Sample ID         102       Interview         103       Interview         104       Interview         105       Interview         106       Interview         107       Interview         Interview       Groundwater         Groundwater       Bedrock         Collected       Bedrock         Intage       Interview		_Easting (NAD83):	7616510.53	Location: <u>PG&amp;E</u>	Topock, Needles Californ
ditor: <u>Sean McG</u> otal Depth: <u>143.1 ft bc</u> <b>G</b> <b>G</b> <b>G</b> <b>G</b> <b>G</b> <b>G</b> <b>G</b> <b>G</b>	ndelaria / F. Perez	Borehole Diameter:	<u>10-12 inches</u>		- 20100055
otal Depth:       143.1 ft bc         Image: Sample ID       Image: Sample ID       Image: Sample ID         101       -       -         101       -       -         101       -       -         102       -       -         103       -       -         104       -       -         103       -       -         104       -       -         105       -       -         106       -       -         107       -       -         108       -       -       -         109       -       -       -         109       -       -       -         110       -       -       -         111       -       -       -         112       -       -       -         113       -       -       -         114       -       -       -         115       -       -       -         116       -       -       -         117       -       -       -         118       -       -       - </td <td></td> <td>_Static Water Level: _Development End Date:</td> <td>See Log for Depths</td> <td>Project Number</td> <td>. <u>30120235</u></td>		_Static Water Level: _Development End Date:	See Log for Depths	Project Number	. <u>30120235</u>
Groundwater Sample ID Groundwater 101 102 103 104 105 106 107 108 109 100 107 108 109 110 Groundwater Samples Collected 111 112 113 114 115 116 117 118 118		_Well Completion:	× Flush Stick-up	To Be Completed	in Well Vault
101 102 103 104 105 106 107 108 109 109 109 109 109 109 109 110 Groundwater Samples Collected 111 112 111 112 113 114 114 115 116 111 111 111 111 112 113 114 114 114 115 116 111 111 111 111 112 113 114 114 115 116 117 118 118 118	Geologic Formation USCS Code USCS Class	Constru	ction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volume
120	mpetent edrock - glomerate	(45.3 - 136.2') 6" 0.02-Slot 316L SS Wire Wrap Screen (44.0 - 143.1') Cemex #2/16 (16x30) Lapis Lustre Sand		(44.0 - 143.1') 79.9 bags	(44.0 - 143.1') 85.5 bags (107% Note: Filter pack swabbed for approximately 5 minutes in 20 f lifts for a total of approximately 2 minutes prior to the installation the well seal.
			= below ground surface, and bellow here		
•	• • • •		otes: solid blue and hollow l c measured during drilling,		irks represent depth to wat

Drilling Co.:       ABC LIOVIN       Deep Well Eleval         Drilling Method:       Sonic Drilling       Northing (NAD83)         Drilling Asst:       J. Candelaria / F. Perez       Borehole Diamet         Jorditor:       Sean McGrane       Development Encore         Otal Depth:       143.1 ft bgs       Well Completion:         Image: Sample ID       Image: Sample ID       Image: Sample ID       Image: Sample ID         Image: Sample ID       Image: Sample ID       Image: Sample ID       Image: Sample ID       Image: Sample ID         Image: Sample ID </th <th>ell Elevation:       503.83 ft amsl         Elevation:       N/A         Client:       PG&amp;E         VAD83):       2101089.85         Project:       Final GW Remedy Phase 2A         AD83):       7616510.53         Diameter:       10-12 inches         Diameter:       10-12 inches         Project Number:       30126255         ent End Date:       6/1/2022         bletion:       X Flush         Stick-up       To Be Completed in Well Vault         Construction Details       Calculated Material Volumes         Material Volumes       Installer         Note:       percentages are the ac volume vs the calculated volu         36.2')       Installer         Wrap       Installer</th>	ell Elevation:       503.83 ft amsl         Elevation:       N/A         Client:       PG&E         VAD83):       2101089.85         Project:       Final GW Remedy Phase 2A         AD83):       7616510.53         Diameter:       10-12 inches         Diameter:       10-12 inches         Project Number:       30126255         ent End Date:       6/1/2022         bletion:       X Flush         Stick-up       To Be Completed in Well Vault         Construction Details       Calculated Material Volumes         Material Volumes       Installer         Note:       percentages are the ac volume vs the calculated volu         36.2')       Installer         Wrap       Installer
Groundwater Sample ID       Image: Solution of the second se	Construction Details Calculated Material Volumes Material Volumes Material Volumes Volume vs the calculated volution of 316L Wrap
121	Calculated Material Volumes     Note: percentages are the ac volume vs the calculated volu       36.2')        ot 316L        Wrap
21	ot 316L ···· L···· Wrap ···· L···
135       X × X ×         136       X × X ×         136       X × X ×         137       X × X ×         138       X × X ×         138       X × X ×         139       X × X ×         140       X × X ×         bobreviations:       USCS = Unified Soil Classification System, ft = fe	<pre>#2/16 is Lustre d (44.0 - 143.1') 79.9 bags (44.0 - 143.1') 79.9 bags (ifts for a total of approximately minutes prior to the installation the well seal.</pre>

	ADIS			Well Const	ruction Log		Sheet: 8 of 8
Date Started:	04/20/2022	2		_Surface Elevation:	504.57 ft amsl	Well ID: EF	R-1
Date Completed				_Shallow Well Elevation:	503.83 ft amsl		
Drilling Co.:	ABC LIOV			_Deep Well Elevation:	<u>N/A</u>	Client: PG&	
Drilling Method:		-		_Northing (NAD83):	2101089.85	-	GW Remedy Phase 2A
Driller Name:	Eddie Ram			_Easting (NAD83):	7616510.53	Location: <u>PG&amp;</u>	<u>E Topock, Needles Californi</u>
Drilling Asst:	J. Candela		erez	Borehole Diameter:	<u>10-12 inches</u>		00400055
Logger: Editor:	<u>Grant Willf</u> Sean McG			_Static Water Level: _Development End Date:	See Log for Depths	Project Numbe	r: <u>30126255</u>
Total Depth:	<u>143.1 ft bg</u>			_Well Completion:	× Flush Stick-up	 ] To Be Completed	in Well Vault
			<i>(</i> 0 m	•	ction Details	<u> </u>	Material Volumes Installed
Groundwa G Sample		USCS Code	USCS Class			Calculated Material Volumes	Note: percentages are the actua volume vs the calculated volume
No Groundwat Samples 42Collected 	Beurock	<- N/A	× × × × × × × × × × × × × × × × × × ×	(44.0 - 143.1') Cemex #2/16 (16x30) Lapis Lustre Sand	(136.2 - 141.6') 6" Sch 40 PVC Sum and SS End Cap	0 (44.0 - 143.1') 79.9 bags	(44.0 - 143.1') 85.5 bags (107%) Note: Filter pack swabbed for approximately 5 minutes in 20 ft lifts for a total of approximately 2 minutes prior to the installation o the well seal.
_143							
_144							
_145							
_146					$\mathbf{O}$		
- — _148							
_149							
_152							
_155							
_158							
_159							
 <sub>160</sub> Abbreviations: l	JSCS = Unif	ied Soil C	lassificat	ion System, ft = feet bas	= below ground surface	amsl = above mean	sea level, SS = Stainless
Abbreviations: l				· · ·	= below ground surface, a otes: solid blue and hollow		sea level, SS = Stainless arks represent depth to wate

<b>AR</b>	RCAD	IS		Bc	pring	g Log	J				She	eet: 1 of	8
Date Started:		/2022		Surface			506.35 ft a			Borin	g No.:	<u>ER-2</u>	
Date Comple Drilling Co.:		LIOVIN		Northin Easting			2101009.5 7616642.7			Client:	PG&E		
Drilling Metho		: Drilling		Total D		03).	<u>146 ft bgs</u>			Project:		W Remedy Pl	hase 2A
Drill Rig Type		Sonic Truck N			•	neter:	8-12 inche			-		Fopock, Need	
Driller Name:		Ramos					60.0 ft bgs						
Drilling Asst:	<u>J. Ca</u>	<u>ndelaria / F. Pe</u>	erez	Sampli	ng Met	thod:	4 inch x 10	) ft. Core B	arrel	Project N	umber:	30126255	
ogger:		Willford		Sampli	-		Continuou						
Editor:	<u>Sean</u>	McGrane		Conver	ted to	Well:	× Yes	No					
Depth (ft) Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class			Soil Descr	iption			Drilling Notes	Drilling Fluid
 _ 1			Fill	SM		fine to ve small to	Silty sand wit ery coarse gra very large pet o subangular;	ned, angular bles, angular	to subroun to subang	d; little silt; lit ular; little gra	tle nules,		
_ 2 _ 3 _ 4 5.5 _ 5 _ 6 _ 7			Weathered Bedrock - Conglomerat	N/A		Š/4); mić intenselj observec friable; d process.	Sedimentary rocrystalline t fractured; ma d, 1-4 inches i ry; NOTE: Co	o coarse grain issive; some o n length; mosi re sample mo	ned, angula competent t fragments stly pulver	ar; hard; very rock fragmer s are weak ar zed by drilling	tts Id J		
	No Sieve Samples Collected	No Groundwater Samples Collected			*****	5/4); mic intensely and friab	Sedimentary I rocrystalline t fractured; ma e with a few ( nostly pulveriz	o coarse grair issive; most fr competent roc	ned, angula agments o k fragmen	ar; hard; very observed are	weak	(7.0 - 50.0') Rough drilling	(7.0 - 50.0') No drilling flui used
_13_					$\left  \begin{array}{c} \times & \times & \times \\ \times & \times & \times \\ \times & \times & \times \end{array} \right $								
-			Weathered Bedrock -	N/A	$\begin{array}{c} \times \times \times \\ \times \times \\ \times \times \end{array}$								
_14			Conglomerat	e	× × × × × × × × ×								
- 5					$\left  \begin{array}{c} \times \times \times \\ \times \times \end{array} \right $								
_15					$\begin{array}{c} \times \times \times \\ \times \times \\ \times \times \end{array}$								
_16_													
					× × × × × ×								
_17													
					$\begin{array}{c} \times \times \times \\ \times \times \end{array}$								
_18					$  \times \times \times \\ \times \times \times \\ \times \times \times $								
- 5					$\left  \begin{array}{c} \times \times \times \\ \times \times \end{array} \right $								
_19					$\begin{array}{c} \times \times \times \\ \times \times \\ \times \times \end{array}$								
20					$\times \times \times$ $\times \times \times$								
	s: USCS =	Unified Soil C	lassification	Syster		feet, bgs	s = below g	round surfa	ace, ams	sl = above i	mean se	a level, NR =	No Recove
I/A = Not Ap	oplicable, G	W = groundwa	ater, Notes	: solid b	lue an	d hollow	blue water	table mark	ks repres	ent depth	to water	(ft. bgs.) first	encountere
		ximate static n		uring p	re-dev	elopmer	it, respectiv	ely. Appare	ent partia	al recoverie	s can be	the result of	potential
ompaction o	ot sediment	s in the core b	ag.										

<b>P</b> /-	<u> </u>	<u>CAD</u>	IS		Bc	pring	g Log	9		She	eet: 2 of	8
ate Sta			1/2022		Surface			506.35 ft amsl	Borin	a No.:	<u>ER-2</u>	
	•	ed: <u>05/08</u>			Northin		,	2101009.50		-		
rilling C			LIOVIN		Easting	•	83):	7616642.75	Client:	PG&E		
rilling N	/lethoo		c Drilling		Total D			<u>146 ft bgs</u>	Project:	Final G	W Remedy Pl	nase 2A
rill Rig		<u>Terra</u>	Sonic Truck I					8-12 inches	Location:	<u>PG&amp;E</u>	Topock, Need	<u>les Californi</u>
riller Na			e Ramos		-			<u>60.0 ft bgs</u>				
rilling A	sst:		indelaria / F. P		Sampli	-		4 inch x 10 ft. Core Barrel	Project N	umber:	30126255	
ogger:			t Willford		Sampli			Continuous	_			
ditor:		<u>Sean</u>	McGrane		Conver	ted to	Well:	X Yes No				
(ft) Becovery	(ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
-	5			Weathered Bedrock - Conglomerat	N/A	× × × × × × × × × × × × × × × × × × ×	5/4); míc intensely and friab	Sedimentary Rock - Conglomerate; rocrystalline to coarse grained, ang r fractured; massive; most fragment le with a few competent rock fragm nostly pulverized by drilling process	ular; hard; very s observed are ents; dry; NOTE	weak		
_22					 NR	$\hat{\mathbf{N}}$	(22-23 ft	) No Recovery; see Drilling Notes.			(22.0 - 27.0') Top foot of drill	
23_					<b>↓</b>	ŔĴ					run fell out of core barrel	useď
4							5/4); mic	) Sedimentary Rock - Conglomerate rocrystalline to coarse grained, and	ular; hard; very		during extraction onto	
24						$\begin{array}{c} \times \times \times \\ \times \times \times \\ \times \times \end{array}$	and friab	r fractured; massive; mo <mark>st</mark> fragme <mark>nt</mark> le with a few competent rock fragm	ents; dry; NOTE		drill deck/into hopper.	
-	4					$\begin{array}{c} \times \times \times \\ \times \times \end{array}$	sample r	nostly pulverized by drilling process	3.		hohher.	
25						$\begin{array}{c} \times \times \times \\ \times \times \end{array}$						
4						$\begin{array}{c} \times \times \times \\ \times \times \\ \times \times \end{array}$						
26						$ \begin{array}{c}                                     $						
-						$\begin{array}{c} \times \times \times \\ \times \times \end{array}$						
27						$\begin{array}{c} \times \times \times \\ \times \times \end{array}$						
-						$\begin{array}{c} \times \times \times \\ \times \times \\ \times \times \end{array}$						
_28						$  \times \times \times \\ \times \times \times$						
-						$\begin{array}{c} \times \times \times \\ \times \times \times \\ \times \times \end{array}$						
.29						$\begin{array}{c} \times \times \times \\ \times \times \\ \times \times \end{array}$						
-	5	No Sieve	No			× × × × × ×						
.30		Samples Collected	Groundwater Samples			$\times \times \times$ $\times \times \times$ $\times \times \times$						
		Collected	Collected			$\times \times \times$ $\times \times \times$						
31				Weathered		$\times \times \times$ $\times \times \times$						
-				Bedrock -	N/A	× × × × × × × × ×						
.32				Conglomerat	e	$  \times \times \times \\ \times \times \times$						
						$\times \times \times$						
.33						$\begin{array}{c} \times \times \times \\ \times \times \times \\ \times \times \end{array}$						
-						$\begin{array}{c} \times \times \times \\ \times \times \end{array}$						
34						$\begin{array}{c} \times \times \times \\ \times \times \\ \times \times \end{array}$						
	5					$\begin{array}{c} \times \times \times \\ \times \times \end{array}$						
.35						$\begin{array}{c} \times \times \times \\ \times \times \end{array}$					(35.0')	(35.0')
36_						$\begin{array}{c} \times \times \times \\ \times \times \\ \times \times \end{array}$					6-inch casing getting hung	No drilling flu used
						$\times \times \times$					up at approxmately	
37						$  \times \times \times \\ \times \times \times$					35 ft. bgs. Trip out 6-inch to	
~ +						$\begin{array}{c} \times \times \times \\ \times \times \\ \times \times \end{array}$					drill with larger	
.38_						$  \times \times \times \\ \times \times \times$					diameter tooling (see	
						$\begin{array}{c} \times \times \times \\ \times \times \end{array}$					Drilling Logs). 6-inch pilot	
39_	6					$\begin{array}{c} \times \times \times \\ \times \times \times \\ \times \times \end{array}$					hole drilling resumes on	
						$  \times \times \times \\ \times \times \times$					4/25/22.	
40						× × × × × ×						
	tions:	USCS =	Unified Soil C	lassification	Syster	n, ft =	feet, bgs	s = below ground surface, ar	nsl = above	mean se	a level, NR = l	No Recove
								blue water table marks repr				
urina dr	rilling	and appro	oximate static r	neasured d	uring p	re-dev	elopmer	it, respectively. Apparent pa	tial recoverie	es can be	the result of	ootential
-			ts in the core b									

C         B         Osimple D         Osim D         Osimple D         Osim D		<b>AD</b>	IS		Bc	oring	j Log	9		She	et: 3 of	8
Date Completed:       02002/2002       Northing (NAD85):       2101002:00       Client:       PCALE         Drilling Method:       Sonic Drilling A.M.       Total Depth:       146 ft bgs       Project:       Final GW Renderly Phase 2A.         Drilling Method:       Sonic Druck Mounted.       Devole Diameterline       121 Inches       Location:       PCALE       Devole Diameterline         Driller Assat:       Location:       PCALE       Devole Diameterline       Continuous       Project:       Final GW Renderly Phase 2A.         Driller Assat:       Location:       PCALE       Devole Diameterline       Double S.       Project:									- Borin	q No.:	ER-2	
Drilling Method:         Sonie Drilling         Total Depth         145 fttbgs         Project:         Findad WX Benedety Phase 2A.           Drilling Name:         Edde Ramos         Depth to First Wate: 60.01 fttgs         Locandetra /F. Perez         Sampling Method:         412 Inches         Locandetra /F. Perez         Sampling Method:         412 Inches         Locandetra /F. Perez         Sampling Method:         410 K None         Depth to First Wate: 60.01 fttgs         Project:         First Sampling Method:         410 K None         Project:         Sampling Method:         Continuous	•								_ L	-		
Drill Rg Type:     Terra Sonic Truck Moundel     Borehole Diameter:     8:12 Inches     Location: PG&E Topock, Needles Califor       Drilling Ass:     J. Candelatia / F. Perez     Sampling Method:     4 Inch x 10 In. Core Barrel     Project Number: 30126255       Orgen:     Grant Walford     Sompling Method:     Stat Description     Drilling Note:     Drilling Note:       Seam McGrane     Controuse     Sample ID     Stat Description     Drilling Note:     Drilling Note:       Seam McGrane     Controuse     Stat Description     Drilling Note:     Drilling Note:     Drilling Note:       Seam McGrane     Controuse     Stat Description     Drilling Note:     Drilling Note:     Drilling Note:       Seam McGrane     Controuse     Stat Description     Drilling Note:     Drilling Note:     Drilling Note:       44     -     -     -     -     Stat Description     Drilling Note:     Drilling Note:       50     -     -     -     -     -     -     -       6.0     -     -     -     -     -     -       6.1     -     -     -     -     -     -       6.2     -     -     -     -     -     -       6.3     -     -     -     -     -	-				-		83):					0.4
Driller Name:       Eddle Ramos       Depth to Frist Water 60.01 bps       Project Number: 30126255         Onling Asst:       J. Candelaria / F. Perzz       Sampling Method:       4 inch x 10 ft. Core Barrel       Project Number: 30126255         Grant Wilford       Sampling Method:       Sampling Method:       Sol Decorption       Driing Note         Get Semple D       Grant Wilford       Converted to Well:       C verted to Well:       Sol Decorption       Driing Note         Get Semple D       Grant Wilford       Converted to Well:       C verted to Well:       Sol Decorption       Driing Note       Driing Note         All	-		-			-	actor:					
J. Candedaria / F. Perez       Sampleng Method:       A inclux 10.ft. Core Barrel.       Project Number: 30126255         Logger:       Statu Williord       Sampleng Interval:       Continuous       Interval:       Continuous         Statu Nuclicante       Converted to Welt       Converted to Welt       Sampleng Interval:       Onling Flu         Statu Nuclicante       Groundwater       Sige       Sige       Sampleng Interval:       Sampleng Interval:       Drilling Flu         Statu Nuclicante       Groundwater       Sige       Sige       Sige       Sampleng Interval:       Sampleng Interval:       Drilling Flu         41       -       -       -       -       Sampleng Interval:       Sampleng Interval:       Sampleng Interval:       Sampleng Interval:       Sampleng Interval:       Sampleng Interval:       Drilling Flu         -44       -										FGALI	OPOCK, NEEU	
coge:         Grant Wilford         Sample ID         Sample ID         Converted to Well:         Q Yes         No <u>68</u> <u>89</u> <u>80</u> <u>8</u>								•	Project N	umber: 3	30126255	
Editor:       Sam McGrane       Converted to Well:       Yet into       No	•				•	•						
All 6 All		<u>Sean l</u>	McGrane	<u> </u>				🛛 Yes 🗌 No				
<ul> <li>41</li> <li>44</li> <li>44</li> <li>44</li> <li>44</li> <li>44</li> <li>44</li> <li>44</li> <li>44</li> <li>44</li> <li>45</li> <li>4</li> <li>46</li> <li>47</li> <li>48</li> <li>49</li> <li>50</li> <li>5</li> <li>80 Siere Samples Collected Samples Collected Samples active status in the construction of the system of the system</li></ul>	Depth (ft) (ft) (ft) (ft) Sa			Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
		mples	Groundwater Samples	Weathered Bedrock - Conglomera	N/A N/A	x x x x x x x x x x x x x x x x x x x	5/4); mic intensely and friat sample (50-72 ft 5/4); mi intensely and friat	) Sedimentary Rock - Conglomerate crocrystalline to coarse grained, ang fractured; massive; most fragments ble with a few competent rock fragments of the second second second second point of the second second second second point of the second second second second practured; massive; most fragments le with a few competent rock fragments	; reddish browr ular; hard; very onts; dry; NOTE	weak E Core	Drilling becoming significantly rougher. (52.0 - 64.0')	(52.0 - 64.0' No drilling flu

ate Started: ate Completed rilling Co.: rilling Method: rill Rig Type: riller Name: rilling Asst: ogger:	<u>ABC L</u> <u>Sonic</u> Terra	/2022 _IOVIN		Surface	e Eleva	tion.	506.35 ft amsl	<b>—</b> ·		ED 2	
rilling Co.: rilling Method: rill Rig Type: riller Name: rilling Asst: ogger:	<u>ABC L</u> <u>Sonic</u> Terra							Borin	g No.:	<b>ER-2</b>	
rilling Method: rill Rig Type: riller Name: rilling Asst: ogger:	<u>Sonic</u> Terra				g (NAE		2101009.50	_			
rill Rig Type: riller Name: rilling Asst: ogger:	Terra			Easting		83):	7616642.75	_ Client:	PG&E		
riller Name: rilling Asst: ogger:		-		Total D	•		<u>146 ft bgs</u>			<u>N Remedy Pr</u>	
rilling Asst: ogger:		Sonic Truck N					8-12 inches 60.0 ft bgs	_ Location:	PG&E	Topock, Need	es Californ
ogger:		<u>Ramos</u> Idelaria / F. Po		Samplii			4 inch x 10 ft. Core Barrel	_ _ Project N	umbor: '	20126255	
		Willford		Samplii			Continuous			50120255	
ditor:		McGrane		Conver			× Yes □ No	-			
			-								
Recovery (ft) (ft)	Sieve ample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
/0 Si	o Sieve amples ollected	No Groundwater Samples Collected	Weathered Bedrock - Conglomerat	N/A	x x x x x x x x x x x x x x x x x x x	5/4); mi intensely and friat sample	) Sedimentary Rock - Conglomerate; i crocrystalline to coarse grained, angu / fractured; massive; most fragments of ble with a few competent rock fragmer mostly pulverized by drilling process. bserved slight moisture on rock fragm	lar; hard; very observed are v its; dry; NOTE	veak	(64.0 - 67.0') Drilling becoming significantly rougher. (67.0 - 105.0') Rough drilling	(64.0 - 67.0' No drilling flu used (67.0 - 105.0 No drilling flu used
72 73			Weathered Bedrock - Conglomerat	N/A		(72-73.5	ft) No Recovery; see Drilling Notes.		!	(72.0 - 77.0') Top portion of drill run fell out of core barrel during	(72.0 - 77.0' No drilling flu used
74			Weathered Bedrock - Conglomerat	N/A	x x x x x x x x x x x x x x x x x x x	(2.5YR s intensely and friat sample	ft) Sedimentary Rock - Conglomerate 5/4); microcrystalline to coarse grained ( fractured; massive; most fragments o ble with a few competent rock fragmer mostly pulverized by drilling process. ft) Rock fragments are moist.	d, angular; har observed are v	d; very veak	extraction onto drill deck/soil hopper.	
/A = Not Applic	able, G\	N = groundw	ater, Notes	: solid b	$\begin{array}{c} x & x & x \\ x & x & x \\ x & x & x \\ x & x &$	d hollow	s = below ground surface, am / blue water table marks repres nt, respectively. Apparent partia	sent depth	to water	(ft. bgs.) first e	encountere

	<u>CAD</u>	IS		BC	pring	g Log		Shee	et: 5 of	8
ate Started:	<u>03/31</u>			Surface			Boring	No.:	ER-2	
ate Complete				Northin			_			
rilling Co.:				Easting				G&E		
rilling Method		Drilling		Total D	•	<u>146 ft bgs</u>			V Remedy Pr	
orill Rig Type:		Sonic Truck N					_ Location: <u>P</u>	G&E T	opock, Need	les Californ
oriller Name:		Ramos		•		Water: <u>60.0 ft bgs</u>			0400055	
Drilling Asst:		ndelaria / F. P.		Sampli	-		_ Project Num	iber: <u>3</u>	0126255	
ogger:		Willford		Sampli Conver			_			
ditor:	Sean	McGrane				Well: 🛛 Yes 🗌 No				
Depth (ft) (ft) (ft) (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
_815			Weathered Bedrock - Conglomerate	N/A	× × × × × × × × × × × × × × × × × × ×	(73.5-82 ft) Sedimentary Rock - Conglomerati (2.5YR 5/4); microcrystalline to coarse graine intensely fractured; massive; most fragments and friable with a few competent rock fragme sample mostly pulverized by drilling process.	d, angular; hard; \ observed are wea	k		
.82 .83 .84			Weathered Bedrock - Conglomerate	 NR		(82-84.5 ft) No Recovery; see Drilling Notes.			(82.0 - 87.0') Top portion of drill run fell out of core barrel during extraction onto drill deck/soil hopper.	(82.0 - 87.0 No drilling flu used
- 2.5 .85 .86 .87					× × × × × × × × × × × × × × × × × × ×	(84.5-117 ft) Sedimentary Rock - Conglomera (2.5YR 5/4); microcrystalline to coarse graine intensely fractured; massive; most fragments and friable with a few competent rock fragme sample mostly pulverized by drilling process.	d, angular; hard; v observed are wea	/ery		
	No Sieve Samples	No Groundwater Samples			*****	0				
91 92 93	Collected	Collected	Weathered Bedrock - Conglomerate	N/A	× × × × × × × × × × × × × × × × × × ×					
945 5 95 96					****	(94 ft) Slight increase in competent rock fragr	nents.			
.97					× × × × × × × × × × × ×				(97.0 - 127.0')	(97.0 - 127.0
986 99					× × × × × × × × × × × × × × × × × × ×				Began using water to advance in 6-inch casing.	500 gallons water used 450 gallons water recovered; { gallons of water lost
100				<u> </u>	$\times$ $\times$ $\times$	· · · · · · · · ·			–	
						feet, bgs = below ground surface, am				
						d hollow blue water table marks repre				
		vimata static r	neasured di	urina p	re-dev	elopment, respectively. Apparent part	al recoveries o	an be i	the result of r	ootential

ARC	<u>AD</u>	S		Bo	oring	g Log	]			Sh	eet: 6 of	8
Date Started:	03/31/			Surfac			506.35 ft a		- Borin	a No.:	ER-2	
Date Completed:				Northir	•	,	2101009.5					
Drilling Co.:	ABC L			Easting		83):	7616642.7	5	Client:	PG&E		
Drilling Method:	Sonic	•		Total D	-		<u>146 ft bgs</u>		Project:		W Remedy Pl	
Drill Rig Type:		<u>Sonic Truck N</u> Domos	viounted				8-12 inches	6	Location:	PG&E	Topock, Need	les Californi
Driller Name: Drilling Asst:		<u>Ramos</u> delaria / F. Pe		Sampl			60.0 ft bgs	ft. Core Barrel	— Project N	umber:	30126255	
Logger:		Willford		Sampl	-		Continuous			umber.	00120200	
Editor:		McGrane			rted to		⊠ Yes [	 ] No	_			
- L			in in in iteration is a second		(0.10							
	Sieve mple ID	Groundwater Sample ID	Geologic Formation	USCS Code	x x x Class			Soil Description			Drilling Notes	Drilling Fluid
_110_  Sa	Sieve mples lected	No Groundwater Samples Collected	Weathered Bedrock - Conglomera	N/A	x x x ¥ x x x x x x x x x x x x x x x x	(2.5YR { intensely and friat sample (100.7-1	i/4); microcryst	ry Rock - Conglomer alline to coarse grain sive; most fragment ompetent rock fragment ad by drilling process ments are moist.	ied, angular; hai s observed are i ents; dry; NOTE	rd; very weak	(105.0 - 107.0') Significantly rougher drilling. (117.0 - 120.0') Top portion of drill run fell out of core barrel during extraction onto drill deck/soil	(105.0 - 107.0') No drilling flu used (117.0 - 120.0') No drilling flu used
			<u> </u>		/_/						hopper.	
								ound surface, ar table marks repr				
wa – inor Abbilci									-		· • • /	
luring drilling and	l onn	vimate et-ti	n n n n n n n n n n n n n n n n n n n							0 000 -		

9	AR	Ċ.	١D	IS		Bo	pring	g Log			Sh	eet: 7 of	8
	started		03/31/			Surfac			506.35 ft amsl	Borir	ng No.:	<u>ER-2</u>	
	omple					Northir			2101009.50	_ L	_		
)rilling						Easting		83):	7616642.75	_ Client:	PG&E		
-	Metho			Drilling		Total D	•		<u>146 ft bgs</u> 8-12 inches	_ Project:		<u>W Remedy Pł</u>	
	g Type Name:			<u>Sonic Truck I</u> Ramos					60.0 ft bgs	_ Location.	PGAE	Topock, Need	les Callom
	Asst:			ndelaria / F. P		Sampli			4 inch x 10 ft. Core Barrel	– Proiect N	lumber:	30126255	
.ogge				Willford		Sampli	-		Continuous			00.20200	
Editor:				McGrane		Conve	•		🛛 Yes 🗌 No	_			
Depth (ft)	Recovery (ft)		ieve iple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
	6				Weathered Bedrock - Conglomera	N/A	× × × × × × × × × × × × × × × × × × ×	(2.5YR) intensel and friat sample	7 ft) Sedimentary Rock - Conglomera 5/4); microcrystalline to coarse graine y fractured; massive; most fragments ble with a few competent rock fragme mostly pulverized by drilling process. 122 ft) Rock fragments are moist.	ed, angular; ha observed are	rd; very weak	(123.0 - 127.0') Drilling becoming significantly rougher. Core fell out of core barrel took two attempts to recover.	(123.0 - 127.0') No drilling flu used
- 127 128 - 129						NR		(127-12	9.4 ft) No Recovery; see Drilling Note	 s.		(127.0 - 132.0') Top portion of drill run fell out of core barrel during extraction onto drill deck/soil	(127.0 - 132.0') No drilling flu used (127.0 - 137.0') 500 gallons water used
_ 130_ _ 131_ _ 132_	2.6	No S Sam Colle	ples	No Groundwater Samples Collected			× × × × × × × × × × × × × × × × × × ×	(2.5YR intensel and friat	45 ft) Sedimentary Rock - Conglome 5/4); microcrystalline to coarse graine f fractured; massive; most fragments ble with a few competent rock fragme mostly pulverized by drilling process.	ed, angular; ha observed are	rd; very weak	hopper. (127.0 - 137.0') Drilled with water to advance 6-inch casing.	400 gallons water recovered; 1 gallons of water lost
_  							× × × × × × × × × × × × × × × × × × ×						
- 135 136 -	5				Weathered Bedrock - Conglomera	N/A	× × × × × × × × × × × × × × × × × × ×						
137 138 139 140	8						*****					(137.0 - 145.0') Drilled with water to advance 6-inch casing.	(137.0 - 145.0') 300 gallons water used 200 gallons water recovered; 1 gallons of water lost
									s = below ground surface, am				
		-		-					/ blue water table marks repre-				
uring	drilling			ximate static r s in the core b		iuring p	re-dev	elopmei	nt, respectively. Apparent part	al recoverie	es can be	e the result of	potential

Date Surface Evolution:       D03.5 Lamal       Boring No.:       ER.2         Date Completed:       0508/0022       Northing (NAD83):       2010003.60       Clinic:       POSE         Date Completed:       ABC L40VIN       Easting (NAD83):       7616642.75       Clinic:       POSE       Encent dWR Remarky Phase 2A.         Date Rome:       Extension Truck Mounted       Borchab Diamater:       8.12 inches       Location:       POSE       Topola Completed:       148 https://doi.org/10.1016/0.1016.000         Date Rome:       Gata Multidia:       Decht Preve:       Extension Truck Mounted       Decht Preve       Extension Truck Multidia:       Prevent Contens:       POSE Topole. Number:       201262255         Date Rome:       Sampling Method:       Locations:       Decht Prevent       IS Yes       No       No         State       Sampling Intervel       Sampling Intervel       Contentaus:       Contentaus:       Prevent Number:       201262255         141       Sampling Intervel       Sampling Intervel       Contentaus:       Contentaus:       Prevent Number:       201262255         142       Sampling Intervel       No       Contentaus:       Contentaus:       Prevent Number:       201262255         143       No       Sampling Intervel       Contentare Preven	9	AR	CAD	S		Bo	oring	J Log	Sh	eet: 8 of	8
Jake Completed:       Bobble Completed:       Bobble Completed:       PC/00023       Claiming (NACR3);       2101003.90         Dinling Additude:       Sonic Dinling.       Total Depth:       146 ftbgs.       Project:       Final GWE medy Phase 2A.         Dinling Method:       Sonic Dinling.       Total Depth:       146 ftbgs.       Location:       PCSEE Topace, Needles California         Dinling Asst:       J. Candelaria LF. Perez.       Sampling Interval:       A ftbn X 101 (Loca Barral).       Project Number:       30126255         Logar:       Sam MGGrane.       Continuous       Continuous       Said Description       Driling Nees.       Driling Ne									Borina No.:	: ER-2	
Drilling Method:       Sone Defining       Total Deptr:       146 B.gs       Project:       Fna GW Rendy Phase 2A         Drilling Assi:       J.Candelaria (J: Faraz Sone Truched Demoters B-12 Inches       Location: PGAE Topock. Needles California         Dorger:       Stan McGrante       Sampling Intervic       Constructions       Project:       Project: Needles California         Construction       Sampling Intervic       Constructions       Constructions       Project:       Project:       Drilling Assi:         Construction       Same McGrante       Converter to Weil:       [190.4 166 B)       Sail Decorption       Drilling Assi:       Drilling Assi:       Drilling Assi:       Converter to Weil:       [190.4 166 B)       Sail Decorption       Drilling Assi:		•					- 1				
DNI RG Type:       Tera Sonic Truck Mourted       Borehole Dameter       8:12 inches       Location: PG&E Topock, Needles California         DNIEN Name:       J. Candadata / F. Poroz:       Sampling Method:       A lon X 101, Coro Barrel.       Project Number: 30126255         Dorgon:       Sam McGrane       Converted to Welk:       © Yes □ No         Édior:       Sam McGrane       Converted to Welk:       © Yes □ No         141       Sample:       Onling Name:       Converted to Welk:       © Yes □ No         141       Sample:       Converted to Welk:       © Yes □ No       Drilling Nove       Dr	-					-		,			
Driffer Name:       Eddle Ramos       Depth to First Water: 60.01 bgs         Dorgen Name:       J. Candelsinal / L. Perzez       Sampling Mathod       A link x 10 th. Core Barrel       Project Number: 30126255         Logger:       J. Candelsinal / L. Perzez       Sampling Intervet:       Continuous       Continuous         Editor:       Sean MoGrane       Converted to Weit:       X Yes       No         141       Sample D       Sample D       Sample D       Sample D       Dating Plad         142       Sample D       Sample D       Sample D       Sample D       Dating Plad       Dating Plad         142       Intervent Hall Intervent Inte	-			-			•	-	•	•	
Draing Astr.       J. Candelaria /E. Percz.       Sampling Inferenci.       4 Ind. X. 10. ft. Core Barrel.       Project Number: 30126255.         Editor:       Sean McGrane       Converted to Well:       Yes       No <u>Sean McGrane</u>									Location: PG&E	<u>I opock, Need</u>	les California
Logger:       Grant Williord       Sampling Intervat:       Continuous         Editor:       Sean McGrane       Converted to Well:       No                §E              §E						-		-	Broject Number:	20126255	
Editor:       Sean McGrane       Converted to Welk       Yes       No         Sean McGrane       Groundwater       Seg       Seg       Sel       Solution       Dnling Notes       Dnl	3					•	•		Floject Nulliber.	30120233	
get       Surple D       Groundwater Sample D       get       get <t< td=""><td></td><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td></td><td></td><td></td><td></td></t<>						-	-				
141       Image: Section of the section o	5										
141	Depth (ft)	Recover (ft)			Geologi Formatic	USCS Code				Drilling Notes	Drilling Fluid
142       8       No Sive Samples       Na       143       144       145							$  \mathbf{x} \mathbf{x} \mathbf{x}  $	(2.5YR 5/4); microcrystalline to coarse grained, intensely fractured; massive; most fragments of	, angular; hard; very bserved are weak		
145       0							$ X \times X $		s; dry; NOTE: Core		
145       0	_142_										
145       0		8		No		N/A					
145       0	_143_		Samples	Groundwater	Conglomerate						
145       0			Collected								
145       0	144										
146       It45.146 ft) No Recovery; see Drilling Notes.       (145.07)         147       End of Boring at 146 ft tigs.       Drilling Notes.         148       It48.07)       Bride Original State         147       It48.07)       Bride Original State         148       It48.07)       Bride Original State         144       It48.07)       Bride Original State         148       It48.07)       Bride Original State         149       It48.07)       Bride Original State         148       It48.07)       Bride Original State         149       It48.07)       Bride Original State         149       It48.07)       Bride Original State         150       It48.07)       Bride Original State         151       It48.07)       Bride Original State         152       It48.07)       Bride Original State         153       It48.07)       Bride Original State         154       It48.07)       Bride Original State         155       It48.07)       Bride Original State         156							$  \times \times \times$				
146       Image: Construction of Boring at 146 ft Bgs.       Dilled during duri	145						$\overset{\times \times \times}{\frown}$	(145-146 ft) No Recovery; see Drilling Notes.			
End of Boring at 146 ft bgs. 147- 148- 148- 148- 148- 148- 148- 148- 148- 150- 150- 151- 152- 153- 153- 154- 155- 155- 155- 155- 156- 156- 156- 156- 156- 157- 157- 157- 158-	1/6	0				NR				Drilled during	No drilling fluid
147- 148- 149- 160- 161- 161- 162- 163- 164- 165- 166- 165- 166- 165- 166- 166- 166	140						V	End of Boring at 146 ft bgs.		10-inch	used
148         149         150         151         152         153         154         155         156         157         158         159         158         159         151         154         155         156         157         158         159         150         151         152         154         155         156         157         158         159         160         Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Recovery, NA = Not Applicable, GW = groundwater, Notes: solid bue and hollow blue water table marks represent depth to water (ft. bgs.) first encountered during drilling and approximate static measured during pre-development, respectively. Apparent partial recoveries can be the result of potential											
148 149 160 151 152 153 154 155 156 156 156 156 156 156 156											
<ul> <li></li></ul>	148										
<ul> <li></li></ul>		-									
<ul> <li></li></ul>	149										
<ul> <li></li></ul>											
<ul> <li></li></ul>	<u>150</u>										
<ul> <li></li></ul>											
<ul> <li></li></ul>	<b>IOI</b>										
<ul> <li></li></ul>	152										
<ul> <li></li></ul>											
<ul> <li></li></ul>	_153_										
<ul> <li></li></ul>	L _										
<ul> <li></li></ul>	154										
<ul> <li></li></ul>											
<ul> <li></li></ul>											
<ul> <li></li></ul>											
<ul> <li></li></ul>	156										
<ul> <li></li></ul>	167										
	158										
Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Recovery, N/A = Not Applicable, GW = groundwater, Notes: solid blue and hollow blue water table marks represent depth to water (ft. bgs.) first encountered during drilling and approximate static measured during pre-development, respectively. Apparent partial recoveries can be the result of potential											
Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Recovery, N/A = Not Applicable, GW = groundwater, Notes: solid blue and hollow blue water table marks represent depth to water (ft. bgs.) first encountered during drilling and approximate static measured during pre-development, respectively. Apparent partial recoveries can be the result of potential											
Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Recovery, N/A = Not Applicable, GW = groundwater, Notes: solid blue and hollow blue water table marks represent depth to water (ft. bgs.) first encountered during drilling and approximate static measured during pre-development, respectively. Apparent partial recoveries can be the result of potential	<u> </u>										
N/A = Not Applicable, GW = groundwater, Notes: solid blue and hollow blue water table marks represent depth to water (ft. bgs.) first encountered during drilling and approximate static measured during pre-development, respectively. Apparent partial recoveries can be the result of potential						<u> </u>					
during drilling and approximate static measured during pre-development, respectively. Apparent partial recoveries can be the result of potential	-										
			-	-					-	· • •	
		-				anna h		sopment, respectively. Apparent partia			

e Started: e Completed ng Co.: ng Method: er Name: ng Asst: ger: or: al Depth:	05/08/2022 : 05/10/2022 ABC LIOVIN Sonic Drilling Eddie Ramos			_Surface Elevation:	506.35 ft amsl	Well ID: ER	
ng Co.: ng Method: er Name: ng Asst: ger: or:	ABC LIOVIN Sonic Drilling					— vveirid: ER	2-2
ng Method: er Name: ng Asst: ger: or:	Sonic Drilling			_Shallow Well Elevation:	506.02 ft amsl		
er Name: ng Asst: ger: or:	•			_Deep Well Elevation:	<u>N/A</u>	Client: <u>PG&amp;E</u>	
ng Asst: ger: or:	Eddie Ramos			_Northing (NAD83):	2101009.50	Project: <u>Final</u>	GW Remedy Phase 2A
ger: or:				_Easting (NAD83):	7616642.75	Location: <u>PG&amp;E</u>	<u> Topock, Needles Californ</u>
or:	J. Candelaria		ez	Borehole Diameter:	8-12 inches		
	Alexis McIntyr			Static Water Level:	See Log for Depths	Project Number	r: <u>30126255</u>
al Depth:	Sean McGrar	ne		_Development End Date:			
	<u>146 ft bgs</u>			_Well Completion:	Flush Stick-up     ction Details	To Be Completed	in Well Vault
Groundwa Sample I		USCS Code	USCS Class	Consid		Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volum
_	Fill	SM		(0.0 - 1.0') Temporary Surface Completion (1.0 - 2.0') Cemex #2/16	(0.0 - 36.0') 12" Diameter Borehole		(0.0 - 1.0') 7 bags Note: 2.5 x 2.5 ft. concrete pad with 18 inch diameter lockable vault, High Sped 4,500 PSI Concrete.
_			× × × × × × × × × × × × × × × × × ×	(16x30) Lapis Lustre			Note: Cemex #2/16 (16x30) Lap Lustre Sand extended into skirt vault.
-	Weathered Bedrock - Conglomerate	N/A	× × × × × × × × × × × × × × × × × × ×	(2.0 - 5.0') Navite Material (0.3 - 47.1') 6" Sch. 80 PVC Casing			Note: Material used to back fil was from the SPY.
- No Groundwat Samples	er						
Collected	Weathered Bedrock - Conglomerate	N/A	x x x x x x x x x x x x x x x x x x x	(5.0 - 39.6') Portland Cement 5% Bentonite Type I, II, and V with Hydrogel		(5.0 - 39.6') 139.4 gallons	(5.0 - 39.6') 175 gallons (126% Note: Grout seal, used >20% o the caculated voume due to potential voids that formed durin drilling and grout migration.
			× × × × × ×		= below ground surface, ar otes: solid blue and hollow b		

ARC	ADIS			Well Const	ruction Log		Sheet: 2 of 8
ate Started:	05/08/2022			_Surface Elevation:	506.35 ft amsl	Well ID: Ef	R-2
ate Completed:				Shallow Well Elevation:	506.02 ft amsl		`-
rilling Co.:	ABC LIOVIN			_Deep Well Elevation:	<u>N/A</u>	Client: <u>PG&amp;</u>	<u>E</u>
rilling Method:	Sonic Drilling			_Northing (NAD83):	2101009.50	Project: <u>Final</u>	GW Remedy Phase 2A
riller Name:	Eddie Ramos			_Easting (NAD83):	7616642.75	Location: PG&	E Topock, Needles Californ
rilling Asst:	J. Candelaria		Z	Borehole Diameter:	8-12 inches		
ogger:	Alexis McIntyr			Static Water Level:	See Log for Depths	Project Numbe	er: <u>30126255</u>
ditor:	Sean McGran	е		_Development End Date:			
otal Depth:	<u>146 ft bgs</u>			_Well Completion:	⊠ Flush  Stick-up	To Be Completed	l in Well Vault
Groundwat (1) Sample II		USCS Code	USCS Class	Construc	tion Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actu volume vs the calculated volum
22	Weathered Bedrock - Conglomerate	N/A ************************************		(0.3 - 47.1') 6" Sch. 80 PVC Casing (24.5 - 25.5') SS Centralizer (5.0 - 39.6') Portland Cement 5% Bentonite Type I, II, and V with Hydrogel	(36.0 - 145.0') 10.75" Diameter Borehole	(5.0 - 39.6') 139.4 gallons	(5.0 - 39.6') 175 gallons (126% Note: Grout seal, used >20% of the caculated voume due to potential voids that formed durin drilling and grout migration.
.39  40						(39.6 - 45.2')	(39.6 - 45.2') 4 bags (89%)
							sea level, SS = Stainless
				<del>.</del>			arks represent depth to wa
teal, NR = No F	Recovery, N/A =	= Not Ap	plicable		otes: solid blue and hollow	v blue water table m	

ARC	ADIS			Well Const	ruction Log		Sheet: 3 of 8
ate Started:	05/08/2022			_Surface Elevation:	506.35 ft amsl	Well ID: EF	2-2
ate Completed:	05/10/2022			_Shallow Well Elevation:	506.02 ft amsl		<b>` _</b>
rilling Co.:	ABC LIOVIN			_Deep Well Elevation:	<u>N/A</u>	Client: <u>PG&amp;</u>	<u>E</u>
rilling Method:	Sonic Drilling			_Northing (NAD83):	2101009.50	Project: <u>Final</u>	GW Remedy Phase 2A
riller Name:	Eddie Ramos			_Easting (NAD83):	7616642.75	Location: PG&	<u>E Topock, Needles Californi</u>
rilling Asst:	<u>J. Candelaria</u>	/ F. Pe	rez	Borehole Diameter:	8-12 inches		
ogger:	Alexis McIntyr	e		Static Water Level:	See Log for Depths	Project Numbe	er: <u>30126255</u>
ditor:	Sean McGran	е		_Development End Date:			
otal Depth:	<u>146 ft bgs</u>		<u> </u>	_Well Completion:	Flush Stick-up	To Be Completed	in Well Vault
Groundwat		USCS Code	USCS Class	Constru	ction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volum
 			x x x x x x x x x x x x x x x x x x x	(0.3 - 47.1') - 6" Sch. 80 PVC Casing (39.6 - 45.2') Cemex #0/30 - (30x50) Lapis Lustre Sand (42.5 - 43.5') SS Centralizer		4.5 bags (39.6 - 45.2') 4.5 bags	Note: Transition sand seal (39.6 - 45.2') 4 bags (89%) Note: Transition sand seal
45	Weathered Bedrock - Conglomerate	N/A	X X X X X X X X X X X X X X X X X X X	(45.2 - 45.7') Enviroplug Medium — Chips		(45.2 - 45.7') 0.3 bags	(45.2 - 45.7') 0.25 bags (83%) Note: Bentonite seal
47 48 49 50 Groundwate Samples	r		× × × × × × × × × × × × × × × × × × ×	(47.1 - 138.0') 6" 0.02-Slot 316 SS Wire Wrap Screen			
51 52 53 54			x x x x x x x x x x x x x x x x x x x	(45.7 - 146.0') Cemex #2/16 (16x30) Lapis Lustre Sand		(45.7 - 146.0') 80.9 bags	(45.7 - 146.0') 83 bags (103% Note: Filter pack. Ran dummy to and swabbed filter pack for approximately 20 minutes prior the installation of the bentonite/transition sand seal. Grain-size analysis of the filter pack sand showed a higher percentage of fine-grained sand
55 56 57 58 59	Weathered Bedrock - Conglomerate	N/A	X X X X X X X X X X X X X X X X X X X				
60		Scil Cl	$\begin{vmatrix} \times & \times & \times \\ \times & \times & \times \end{vmatrix}$	ion System ft - fact have			soo lovol SS - Stainlass
							sea level, SS = Stainless arks represent depth to wa
		- ινοι Α	nniicadi	e. Gvv – droundwaler. No	nes. suilu diue and nollo/	w Dide waler lable ma	aiks represent depth to Wa

ARC	ADIS			Well Constr	ruction Log	:	Sheet: 4 of 8
ate Started: ate Completed:	05/08/2022			_Surface Elevation:	506.35 ft amsl 506.02 ft amsl	Well ID: EF	R-2
illing Co.:	ABC LIOVIN			_ _Deep Well Elevation:	N/A	Client: PG&I	E
illing Method:	Sonic Drilling			_Northing (NAD83):	2101009.50		GW Remedy Phase 2A
iller Name:	Eddie Ramos			_Easting (NAD83):	7616642.75		E Topock, Needles Californ
illing Asst:	J. Candelaria	/ F. Pere	e7	Borehole Diameter:	8-12 inches		
ogger:	Alexis McIntyr				See Log for Depths	Project Numbe	r: 30126255
ditor:	Sean McGran			_Development End Date:			
otal Depth:	146 ft bgs			Well Completion:	⊠ Flush  Stick-up [	To Be Completed	in Well Vault
Groundwat		USCS Code	USCS Class	Construc	tion Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actu volume vs the calculated volum
	Weathered Bedrock - Conglomerate Weathered Bedrock - Conglomerate	N/A N/A	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	(47.1 - 138.0') 6" 0.02-Slot 316 SS Wire Wrap Screen (45.7 - 146.0') Cemex #2/16 (16x30) Lapis Lustre Sand	= below ground surface,	(45.7 - 146.0') 80.9 bags	(45.7 - 146.0') 83 bags (103% Note: Filter pack. Ran dummy to and swabbed filter pack for approximately 20 minutes prior the installation of the bentonite/transition sand seal. Grain-size analysis of the filter pack sand showed a higher percentage of fine-grained sand sand sand showed a higher percentage of fine-grained sand
					•		
	-		-	-			arks represent depth to wa
	ater measured	aurina c	pevelop	ment and approximate sta	auc measured during drill	ind respectively	

ARC	ADIS			Well Const	ruction Log	:	Sheet: 5 of 8
ate Started:	05/08/2022			_Surface Elevation:	506.35 ft amsl	Well ID: EF	2.2
ate Completed	05/10/2022			_Shallow Well Elevation:	506.02 ft amsl		<b>`</b>
rilling Co.:	ABC LIOVIN			_Deep Well Elevation:	N/A	Client: PG&	
rilling Method:	Sonic Drilling			_Northing (NAD83):	2101009.50	-	GW Remedy Phase 2A
riller Name:	Eddie Ramos			_Easting (NAD83):	7616642.75	Location: <u>PG&amp;</u>	<u>E Topock, Needles Californ</u>
rilling Asst:	J. Candelaria		rez	Borehole Diameter:	8-12 inches		
ogger:	Alexis McIntyr			_Static Water Level:	See Log for Depths	Project Numbe	r: <u>30126255</u>
ditor:	Sean McGrar	ne		_Development End Date:			
otal Depth:	<u>146 ft bgs</u>	1	<u> </u>	_Well Completion:	Flush Stick-up	To Be Completed	in Well Vault
Groundwa Sample II		USCS Code	USCS Class	Construc	tion Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actu volume vs the calculated volum
	Weathered Bedrock - Conglomerate	N/A	× ×	(47.1 - 138.0') 6" 0.02-Slot 316 SS Wire Wrap Screen			
 83 84	Weathered Bedrock - Conglomerate	NR					
85 86 87 88 90 Groundwate Samples Collected 91 92 93 93 94 95 96 97 98 99 100	Weathered Bedrock - Conglomerate	N/A	x x x x x x x x x x x x x x x x x x x	(45.7 - 146.0') Cemex #2/16 (16x30) Lapis Lustre Sand		(45.7 - 146.0') 80.9 bags	(45.7 - 146.0') 83 bags (103% Note: Filter pack. Ran dummy t and swabbed filter pack for approximately 20 minutes prior the installation of the bentonite/transition sand seal Grain-size analysis of the filte pack sand showed a higher percentage of fine-grained san
				tion System, ft = feet, bgs			
	-			<del>.</del>			arks represent depth to wa
	-			ment and approximate sta			

ARC	ADIS		Well Cons	truction Log	:	Sheet: 6 of 8
ate Started: ate Completed:	05/08/2022 05/10/2022		Surface Elevation: Shallow Well Elevation		Well ID: EF	
rilling Co.:	ABC LIOVIN		Deep Well Elevation:	<u>N/A</u>	Client: PG&I	
rilling Method:	Sonic Drilling		Northing (NAD83):	2101009.50	-	GW Remedy Phase 2A
riller Name:	Eddie Ramos	·	Easting (NAD83):	7616642.75	Location: <u>PG&amp;</u>	<u> Topock, Needles Califorr</u>
rilling Asst:	J. Candelaria		Borehole Diameter:	8-12 inches		00400055
ogger:	Alexis McIntyr		Static Water Level:	See Log for Depths	Project Numbe	r: <u>30126255</u>
ditor: otal Depth:	Sean McGran 146 ft bgs	e	Development End Date Well Completion:	e: <u>6/28/2022</u> ⊠ Flush	 To Be Completed	in Mall Mault
	-		Constr	uction Details		
Groundwat Sample II			Class		Calculated Material Volumes	Material Volumes Installed Note: percentages are the actuvolume vs the calculated volume
		N/A	<pre>X X X X X X X X X X X X X X X X X X X</pre>	s = below ground surface.	(45.7 - 146.0') 80.9 bags	(45.7 - 146.0') 83 bags (103% Note: Filter pack. Ran dummy t and swabbed filter pack for approximately 20 minutes prior the installation of the bentonite/transition sand sea Grain-size analysis of the filte pack sand showed a higher percentage of fine-grained sar
	-		icable, GW = groundwater, N			arks represent depth to wa
pas.) static wa	ater measured	auring dev	elopment and approximate s	tatic measured during drill	ing, respectively.	

ARC	ADIS			Well Const	ruction Log		Sheet: 7 of 8
ate Started:	05/08/2022			Surface Elevation:	506.35 ft amsl	Well ID: EF	२-2
ate Completed:				_Shallow Well Elevation:			
0	ABC LIOVIN			_Deep Well Elevation:	<u>N/A</u>	Client: <u>PG&amp;</u>	
•	Sonic Drilling			_Northing (NAD83):	2101009.50	•	GW Remedy Phase 2A
	Eddie Ramos			_Easting (NAD83):	7616642.75	Location: <u>PG&amp;</u>	E Topock, Needles Californ
-	J. Candelaria		ez	Borehole Diameter:	8-12 inches		00400055
	Alexis McIntyr			_Static Water Level:	See Log for Depths	Project Numbe	r: <u>30126255</u>
	<u>Sean McGran</u> 146 ft bgs	e		_Development End Date: _Well Completion:	<u>6/28/2022</u>	 To Be Completed	in Well Vault
				· · ·	ction Details		
Groundwate Sample ID		USCS Code	USCS Class			Calculated Material Volumes	Material Volumes Installed Note: percentages are the actu volume vs the calculated volum
	Weathered Bedrock - Conglomerate	N/A NR	x x x x x x x x x x x x x x x x x x x	(47.1 - 138.0') 6" 0.02-Slot 316 SS Wire Wrap Screen (45.7 - 146.0') Cemex #2/16 (16x30) Lapis Lustre Sand		(45.7 - 146.0') 80.9 bags	(45.7 - 146.0') 83 bags (103% Note: Filter pack. Ran dummy t and swabbed filter pack for approximately 20 minutes prior the installation of the bentonite/transition sand seal Grain-size analysis of the filte pack sand showed a higher percentage of fine-grained san
132_ 	Weathered Bedrock - Conglomerate	N/A	x x x x x x x x x x x x x x x x x x x	(136.2 - 137.2') PVC Well Bung (Plug) (137.2 - 143.4') Cemex #2/16 (16x30) Lapis Lustre Sand and sediment.			(136.2 - 137.2') Note: Well bung was installed 6/8/22 to reduce additional filt ack from entering the well fro potential damage to the sum (137.2 - 143.4') Note: Filter pack sand and sediment in the bottom of the w due to potential damage to th sump or a higher percentage fines in the filter pack materia
		0	$\times \times $				
							sea level, SS = Stainless
				e, GVV = groundwater, No ment and approximate st			arks represent depth to wa
	I DE MOSELIFOR	uurina (	Jevelobl	meni and approximate st	aue measured durind dril	INT TESPECTIVELV	

ate Started: ate Completed: rilling Co.: rilling Method: riller Name: rilling Asst: ogger: ditor: otal Depth:	ABC LIOVIN Sonic Drilling Eddie Ramos J. Candelaria Alexis McIntyr Sean McGrar 146 ft bgs	/ F. Perez e le SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS		(140.0 - 141.0') SS Centralizer (45.7 - 146.0')	N/A 2101009.50 7616642.75 8-12 inches See Log for Depths 6/28/2022	-	GW Remedy Phase 2A     GW Remedy Phase 2A     Topock, Needles California r: 30126255 in Well Vault     Material Volumes Installed     Note: percentages are the actual     volume vs the calculated volume     (45.7 - 146.0') 83 bags (103%)
rilling Co.: rilling Method: riller Name: rilling Asst: ogger: ditor: otal Depth:	ABC LIOVIN Sonic Drilling Eddie Ramos J. Candelaria Alexis McIntyr Sean McGrar 146 ft bgs	/ F. Perez e le SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS	xxxxxxxx Class	Deep Well Elevation: Northing (NAD83): Easting (NAD83): Borehole Diameter: Static Water Level: Development End Date: Well Completion: Construct (140.0 - 141.0') SS Centralizer (45.7 - 146.0')	N/A         2101009.50         7616642.75         8-12 inches         See Log for Depths         6/28/2022         ⊠ Flush □ Stick-up □	Client: PG& Project: Final Location: PG& Project Numbe Project Numbe Calculated	GW Remedy Phase 2A GW Remedy Phase 2A Topock, Needles Californi r: 30126255 in Well Vault Material Volumes Installed Note: percentages are the actual volume vs the calculated volume (45.7 - 146.0') 83 bags (103%)
rilling Method: riller Name: rilling Asst: bogger: ditor: btal Depth: Groundwate Sample ID 141_ 142_ 143_ Groundwate Samples Collected	Sonic Drilling Eddie Ramos J. Candelaria Alexis McIntyr Sean McGrar 146 ft bgs	/ F. Perez e le SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS	x x x x x x x x Class	Northing (NAD83): Easting (NAD83): Borehole Diameter: Static Water Level: Development End Date: Well Completion: Construct (140.0 - 141.0') SS Centralizer (45.7 - 146.0')	2101009.50 7616642.75 8-12 inches See Log for Depths 6/28/2022 ∑ Flush Stick-up □	Project: Final Location: PG& Project Numbe Calculated	GW Remedy Phase 2A E Topock, Needles Californi r: 30126255 in Well Vault Material Volumes Installed Note: percentages are the actua volume vs the calculated volume (45.7 - 146.0') 83 bags (103%)
riller Name: rilling Asst: ogger: ditor: otal Depth:	Eddie Ramos J. Candelaria Alexis McIntyr Sean McGrar 146 ft bgs	/ F. Perez e le SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS	x x x x x x x x Class	Easting (NAD83): Borehole Diameter: Static Water Level: Development End Date: Well Completion: Construct (140.0 - 141.0') SS Centralizer (45.7 - 146.0')	7616642.75         8-12 inches         See Log for Depths         6/28/2022         ∑ Flush ☐ Stick-up ☐	Location: PG&	Topock, Needles Californi r: <u>30126255</u> in Well Vault Material Volumes Installed Note: percentages are the actua volume vs the calculated volume (45.7 - 146.0') 83 bags (103%)
rilling Asst: ogger: ditor: otal Depth:	J. Candelaria Alexis McIntyr Sean McGrar 146 ft bgs	/ F. Perez e le SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS	xxxxxxxx Class	Borehole Diameter: Static Water Level: Development End Date: Well Completion: Construct (140.0 - 141.0') SS Centralizer (45.7 - 146.0')	8-12 inches           See Log for Depths           6/28/2022           ⊠ Flush □ Stick-up □	Project Numbe	r: <u>30126255</u> in Well Vault Material Volumes Installed Note: percentages are the actua volume vs the calculated volume (45.7 - 146.0') 83 bags (103%)
bgger: ditor: btal Depth: Groundwate Sample II 141_ 142_ 143_ Groundwate Samples Collected	Alexis McIntyr Sean McGran 146 ft bgs		xxxxxxx Class	Static Water Level: Development End Date: Well Completion: Construct (140.0 - 141.0') SS Centralizer (45.7 - 146.0')	See Log for Depths           6/28/2022           ⊠ Flush □ Stick-up □	To Be Completed	in Well Vault Material Volumes Installed Note: percentages are the actua volume vs the calculated volume (45.7 - 146.0') 83 bags (103%)
ditor: ptal Depth: Groundwat Sample ID 141_ 142_ 143_ Groundwate Samples Collected	Sean McGrar 146 ft bgs	OCCO CCCC CCCC CCCCC CCCCC CCCCC CCCCC CCCCC	xxxxxxxx Class	Development End Date: Well Completion: Construct (140.0 - 141.0') SS Centralizer (45.7 - 146.0')	6/28/2022 ⊠ Flush □ Stick-up □	To Be Completed	in Well Vault Material Volumes Installed Note: percentages are the actua volume vs the calculated volume (45.7 - 146.0') 83 bags (103%)
Groundwat       Groundwat       Sample IC       141       142       143       Groundwate       Samples       Collected	146 ft bgs	Code V/N XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	xxxxxxxx Class	Well Completion: Construct (140.0 - 141.0') SS Centralizer (45.7 - 146.0')	⊠ Flush  Stick-up	Calculated	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume (45.7 - 146.0') 83 bags (103%)
Groundwate Sample II 141 142 143Groundwate Samples Collected	Weathered Bedrock -	N/A × ×	x x x x x x x x x x x x x x x x x x x	Construc (140.0 - 141.0') SS Centralizer (45.7 - 146.0')		Calculated	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume (45.7 - 146.0') 83 bags (103%)
141 142 143Groundwate Samples Collected	Weathered Bedrock -	N/A × ×	× × × × × × × × × × × × × × × × × × ×	SS Centralizer (45.7 - 146.0')			Note: percentages are the actua volume vs the calculated volume (45.7 - 146.0') 83 bags (103%)
142 143Groundwate Samples Collected	Bedrock -	N/A × ×	× × × × × × × × × × × × × × × × × × ×	SS Centralizer (45.7 - 146.0')			(45.7 - 146.0') 83 bags (103%)
 145		****	****	Cemex #2/16 (16x30) Lapis Lustre Sand (137.2 - 143.4') Cemex #2/16 (16x30) Lapis Lustre Sand and sediment.	(138.0 - 143.4') — Sump and 316 SS End Cap — (145.0 - 146.0') 8" Diameter Borehole	(45.7 - 146.0') 80.9 bags	Note: Filter pack. Ran dummy to and swabbed filter pack for approximately 20 minutes prior t the installation of the bentonite/transition sand seal. Grain-size analysis of the filter pack sand showed a higher percentage of fine-grained sand (137.2 - 143.4') Note: Filter pack sand and sediment in the bottom of the we due to potential damage to the sump or a higher percentage of fines in the filter pack material.
146 147 148 148 149 150						1	1
 151							
_ 152							
_ 153							
 154							
155							
_							
156							
_							
157							
_							
158							
 159							
-							
160   bbreviations: U	SCS = Unified	Soil Class	ificatio	on System, ft = feet. bas	= below ground surface, an	nsl = above mean	sea level, SS = Stainless
					otes: solid blue and hollow b		
	-				atic measured during drilling		

			Boring	<u>J</u> - J			10
Date Completed:       04         Drilling Co.:       Ca         Drilling Method:       Sa         Drill Rig Type:       Ba         Driller Name:       Sa         Drilling Asst:       Ja         Drilling Asst:       Date Asster	3/31/2022 ascade onic Drilling oart Longyear drill hea eve Vasquez ohn Whitman / John ( avid Cornell ean McGrane	Nort East Tota ad Bore Dep Colon Sam Sam		D83):       2100450.05         D83):       7614666.44         182 ft bgs         meter:       6-7 inches         t Water:       93.0 ft bgs         thod:       4 inch x 10 ft. Core Barrel         erval:       Continuous	Location: <u>PG&amp;E</u>	W Remedy Pr Topock, Need	
Depth Depth (ft) Sampl Sampl		Geologic Formation USCS	Code USCS Class	Soil Description		Drilling Notes	Drilling Fluid
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Ve Groundwater Samples Collected	Topock - Alluvium Deposits SW-	sw	(0-10 ft) Topock - Alluvium Deposits; Well gravel (SW-SM); dark brown (7.5YR 3/3); v grained, subangular to subround; little smal angular to subangular; little small to large of subangular; little silt; trace granules, angul clay; dry.          (10-17 ft) Topock - Alluvium Deposits; Well and gravel (SW-SM); brown (7.5YR 3/3); v grained, subangular to subround; little smal angular to subangular; little small to large of subangular; little silt; trace granules, subar clay; dry.         (17-19 ft) Topock - Alluvium Deposits; Well and gravel (SW-SM); brown (7.5YR 3/3); v grained, subangular; little small to large of subangular; little silt; trace granules, subar clay; dry.         (17-19 ft) Topock - Alluvium Deposits; Well and gravel (SW-SM); brown (7.5YR 3/3); v y grained, subangular; little small to large of subangular; little silt; trace granules, subar clay; dry.	I graded sand with silt ar to subangular to ar to subangular; trace	(0.0 - 5.0') Air-knifed for utility clearance on 3/31/22.	(0.0 - 5.0') No drilling fluic used
				feet, bgs = below ground surface, a on, Notes: Solid blue and hollow blu			
1111 - NICT AMPLIANCE		uuu = nan	s per billi	on indies solid dive and hollow bill	e walel lable marks f	epresent deptr	i io water (ft

AR	<u>CAD</u>	S		Bo	oring	Log		She	et: 2 of	10
Date Started:	<u>03/31</u>				e Elevatio		Boring	No.:	FW-02A	
ate Complet					ng (NAD8	-	_			
Prilling Co.:	<u>Casca</u>				g (NAD83	,		<u>3&amp;E</u>		2222 24
Drilling Metho Drill Rig Type:		Drilling Longyear drill		Total D	eptri. ble Diame	<u>182 ft bgs</u> ter: <u>6-7 inches</u>	-		<u>N Remedy Pl</u> opock, Need	
Driller Name:		Vasquez				ater: <u>93.0 ft bgs</u>	_ Location. <u>r c</u>			
Drilling Asst:		Whitman / Joh	n Colon	•			Project Num	ber: 3	30126255	
.ogger:		Cornell			ng Interv		_ ,	_		
Editor:	<u>Sean</u>	McGrane		Conve	rted to W	ell: 🗌 Yes 🖂 TBD				
Depth (ft) Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
_22 22 23 23 24 25 26 27			Topock - Alluvium Deposits	SM		9-27 ft) Topock - Alluvium Deposits; Silty s ry dark gray (7.5YR 3/1); fine to very coars ibangular; little silt; little small to very large ace granules, angular to subangular; trace ace granules, angular to subangular; trace 7-37 ft) Topock - Alluvium Deposits; Well d gravel (SW-SM); very dark gray (7.5YR 3 .5YR 3/3); very fine to very coarse grained.	e grained, angular t pebbles, angular to gular to subangular; clay, dry to moist.	lit	(25.0 - 27.0') Rough drilling	(25.0 - 27.0' No drilling flu used
_28	No Sieve Samples Collected	No Groundwater Samples Collected	Topock - Alluvium Deposits	SM-SW		le small to very large pebbles, angular to s ace small to large cobbles, angular to suba igular to subangular; trace clay; dry to mois	ubangular; little silt ngular; trace granu	; 1	(31.0 - 37.0') Rough drilling	(31.0 - 37.0' No drilling flu used
_35 36 37 _38 38 39 40			Topock - Alluvium Deposits	SM	v C C C C C C C C C C C C C C C C C C C	7-47 ft) Topock - Alluvium Deposits; Silty s ry dark gray (7.5YR 3/1), little dark brown ( arse grained, angular to subangular; little rge pebbles, angular to subangular; trace s igular to subangular; trace granules, angul ay; dry to moist.	7.5YR 3/3); fine to silt; little small to ve mall to large cobble	ry es,	(37.0 - 42.0') Rough drilling	(37.0 - 42.0' No drilling flu used
				-		t, bgs = below ground surface, an				
		-				Notes: Solid blue and hollow blue				
\ <b>~</b> .	nuntered fr	om logging an	d depth to	water	measure	l during the first VAS interval, resp	ectively. Appare	ent pa	rtial recoverie	s can be th

ARC				BO	oring L	og	S	heet: 3 of	10
ate Started:	<u>03/31/2</u>				e Elevation:	<u>554.11 ft amsl</u>	Borina No	.: <u>FW-02A</u>	
ate Completed:					g (NAD83)		_		
Prilling Co.:	Cascad			-	(NAD83):	7614666.44	_ Client: <u>PG&amp;E</u>		-
rilling Method:	Sonic [	•		Total D	•	<u>182 ft bgs</u>	•	GW Remedy Pl	
rill Rig Type:		<u>ongyear drill</u>	head		le Diamete		_ Location: <u>PG&amp;E</u>	Topock, Need	lles Californ
riller Name:		/asquez		•		er: <u>93.0 ft bgs</u>		00400055	
rilling Asst:		<u>Vhitman / Joh</u>	n Colon	-	-		_ Project Number	30126255	
ogger: ditor:	David (	<u>Jornell</u> /IcGrane			ng Interval: ted to Well	<u>Continuous</u> □ Yes ⊠ TBD	_		
42 02	Sieve nple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Flui
_50 Sar	Sieve nples ected	No Groundwater Samples Collected	Topock - Alluvium Deposits	SM-SW	<ul> <li>very coal large clay</li> <li>clay</li> <li>c</li></ul>	<ul> <li>47 ft) Topock - Alluvium Deposits; Silty sa dark gray (7.5YR 3/1), little dark brown (7.5 ge grained, angular to subangular; little sa pebbles, angular to subangular; trace sa pebbles, angular to subangular; trace granules, angular to subangular; trace sular to subangular; trace granules, angular dry to moist.</li> <li>57 ft) Topock - Alluvium Deposits; Well g gravel (SW-SM); dark brown (7.5YR 3/3) (R 3/1); very fine to very coarse grained, small to large cobbles, angular to subangular; trace clay; dry to moist</li> <li>57 ft) Topock - Alluvium Deposits; Well g gravel (SW-SM); dark brown (7.5YR 3/3) (R 3/1); very fine to very coarse grained, small to large cobbles, angular to subangular; trace clay; dry to moist gravel (SW-SM); dark brown (7.5YR 3/2) se grained, angular to subangular; trace clay; first or moist and to very large pebbles, angular to subangular; trace clay; dry to moist and the people sa dry to moist and the people sa dry to subangular; trace clay; dry to moist and the people sa dry to subangular; trace clay; dry to moist and the people sa dry to subangular; trace sa dry to subangular; tra</li></ul>	raded sand with silt little small to very mall to large cobbles, r to subangular; trace	(54.0 - 57.0') Rough drilling	(54.0 - 57.0 No drilling flu used
_ 10 _59 			Topock - Alluvium Deposits		••••••••• •••••••• •••••••• ••••••••	Ilar to subangular; trace small to large co Ingular; trace small to very large pebbles, Ingular; trace clay; dry to moist.	angular to		
				-		bgs = below ground surface, am			
		<u> </u>				otes: Solid blue and hollow blue			
	anad fra	m logging an	d denth to	o water r	neasured o	uring the first VAS interval, respe	ectively, Apparent	partial recoverie	s can be th

ARC		-		BC	oring	Log		Sheet: 4 of	10
ate Started:	<u>03/31/</u>				e Eleva		Borina No	.: FW-02A	
ate Completed:				Northir			_		
rilling Co.:	Casca			Easting			_ Client: <u>PG&amp;</u>		
rilling Method:	Sonic	•		Total D	•	<u>182 ft bgs</u>	•	<u>GW Remedy P</u>	
rill Rig Type:		<u>ongyear drill</u>	head		ble Dian		_ Location: <u>PG&amp;</u>	<u>- Topock, Need</u>	lles Californ
vriller Name:		<u>Vasquez</u> Vhitman / Joh	n Calan			Water: <u>93.0 ft bgs</u> nod: <u>4 inch x 10 ft. Core Barrel</u>			
vrilling Asst:		<u>vniuman / Jon</u> Cornell	<u>n Colon</u>	•	ng inter		_ Project Numbe	30120255	
ogger: ditor:		AcGrane		•	rted to \		-		
	Jean								
	Sieve mple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Flui
61 62 63 63 64 65 66			Topock - Alluvium Deposits	SW-SM		(57-67 ft) Topock - Alluvium Deposits; Well gr and gravel (SW-SM); dark brown (7.5YR 3/2); coarse grained, angular to subangular; little si angular to subangular; trace small to large co subangular; trace clay; dry to moist. (60.5-61 ft) Lens of brown (7.5YR 4/2); silt and moderate plasticity; little very fine to medium granules and small pebbles; moist.	very fine to very It; trace granules, obles, angular to angular to d clay; low to	(64.0 - 66.0') Drill rods chattering	(64.0 - 66.0 No drilling flu used
.70 Sar	Sieve nples lected	No Groundwater Samples	Topock - Alluvium Deposits Topock - Alluvium Deposits	SW-SM		(67-68.5 ft) Topock - Alluvium Deposits; Well and gravel (SW-SM); brown (7,5YR 4/2); very grained, subangular to subround; little small to angular to subround; little granules, angular to little clay; trace small to large cobbles, angula (68.5-70 ft) Topock - Alluvium Deposits; Sand (7,5YR 4/2); no plasticity, no dilatancy; isome - plasticity, no dilatancy; little very fine to mediu subround; trace granules, angular to subround pebbles, angular to subround; medium stiff; m (70-77 ft) Topock - Alluvium Deposits; Well gr	Tine to very coarse overy large pebbles, o subangular; little silt; r to subround; moist. y silt (ML); brown clay, low to medium m sand, angular to d; trace small to large oist. aded sand with	-	
- 71		Collected	Topock - Alluvium Deposits	SW		gravel (SW); brown (7.5YR (4/4); fine to coars subround; little granules, angular to subround large pebbles, angular to subround; trace sma angular to subround; trace silt; trace clay; dry	little small to very all to large cobbles,		
 _78 _79  80			Topock - Alluvium Deposits	SW		(77-87 ft) Topock - Alluvium Deposits; Well gr gravel (SW); brown (7.5YR (4/3); very fine to v angular to subangular; little granules, angular small to very large pebbles, angular to subang large cobbles, angular to subangular; trace sil moist.	ery coarse grained, to subangular; little jular; trace small to t; trace clay; dry to		
				-	-	eet, bgs = below ground surface, am			
						n, Notes: Solid blue and hollow blue			
	tered fro	om logging an	a depth to	o water	measur	ed during the first VAS interval, respe	ctively. Apparent	partial recoverie	es can be th

A	<u>KC</u>	<u>AD</u>	S				Log		She	et: 5 of	10
Date Star		<u>03/31/</u>			Surfac			Boring N	o.:	FW-02A	
ate Con	•				Northir			_			
Prilling Co		<u>Casca</u>			Easting			_ Client: <u>PG8</u>			
Drilling Me			Drilling		Total D	•	<u>182 ft bgs</u>	•		V Remedy Pl	
Drill Rig T			<u>_ongyear drill</u>		Boreho			_ Location: <u>PG8</u>	έΕ Τ	opock, Need	les Californi
oriller Nar		-	Vasquez				Water: <u>93.0 ft bgs</u>				
Drilling As	sst:		<u>Vhitman / Joł</u>			-		_ Project Numbe	er: <u>e</u>	30126255	
ogger:					Sampli	-		_			
Editor:		<u>Sean i</u>	<u>McGrane</u>		Conve		Vell: 🗌 Yes 🖂 TBD				
Depth (ft) Recovery	(#)	Sieve ample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluic
81 82 83 83 1 84 85 85 85 87 88 89 90 6 91	S	o Sieve amples ollected	No Groundwater Samples Collected	Topock - Alluvium Deposits Topock - Alluvium Deposits Topock - Alluvium Deposits	SW SW		<ul> <li>(77-87 ft) Topock - Alluvium Deposits; Well g gravel (SW); brown (7.5YR (4/3); very fine to angular to subangular; little granules, angular small to very large pebbles, angular to subang large cobbles, angular to subangular; trace si moist.</li> <li>(86-87 ft) Decrease in pebble content.</li> <li>(87-88 ft) Topock - Alluvium Deposits; Well g gravel (SW); dark brown (7.5YR 3/4); fine to subangular to subround; little granules, angula small to very large pebbles, angular to subang large cobbles, angular to subround; trace silt; moist.</li> <li>(88-93 ft) Topock - Alluvium Deposits; Poorly dark brown (7.5YR 3/4); very fine to medium q subround; trace granules, angular to subangular lo very large pebbles, angular to subangular lo very large pebbles, angular to subangular moist.</li> </ul>	very coarse grained, to subangular; little gular; trace small to it; trace clay; dry to raded sand with coarse grained, ar to subround; little gular; trace small to trace clay; dry to graded sand (SP); grained, subangular to lar; trace small to	0	(88.0 - 93.0') Difficult drilling and core retrieval. (90.0 - 93.0') Rough drilling	(88.0 - 93.0'' No drilling flu used (90.0 - 93.0'' No drilling flu used
-92 _93 _94 _95 _96 _97 _98	4 g 4/	-02A-SS- 3.5-97 25/2022 12:30	08:55	Topock - Alluvium Deposits Topock - Alluvium Deposits	SW		(93-93.5 ft) Topock - Alluvium Deposits; Well (7.5YR 4/2); fine to coarse grained, subanguls silt; trace clay; wet. (93.5-97 ft) Topock - Alluvium Deposits; Well gravel (SW); dark brown (7.5YR 3/4); very fin grained, angular to subround; little small to ve angular to subround; little granules, angular to to large cobbles, angular to subangular; trace moist. (96-97 ft) Potentially pulverized Metadiorite. (97-107 ft) Topock - Competent Bedrock - Me grayish green (5GY 3/2); pulverized by drilling	ar to subround; trace graded sand with e to very coarse bry large pebbles, o subround; little sma silt; trace clay; dry to tadiorite; very dark			
_99  100 bbreviati	ions: l				n Syster		eet, bgs = below ground surface, am n, Notes: Solid blue and hollow blue				
	т мррію	aule, GV								· · ·	
							ed during the first VAS interval, respe				

9	<u> </u>	<u>20</u>	<u> </u>	S		Bo	pring	Log		She	et: 6 of	10
Date S			03/31/2			Surfac			Borir	ng No.:	FW-02A	
	-	eted:	04/26/2			Northir			_	-		
Drilling	Meth	od.	Casca Sonic I			Easting Total D		3): <u>7614666.44</u> <u>182 ft bgs</u>	_ Client: _ Project:	PG&E	V Remedy P	haaa 24
-	g Type			ongyear drill		Boreho	•	-	-		opock, Need	
	Name			<u>√asquez</u>				Vater: <u>93.0 ft bgs</u>		. <u>1 OUL 1</u>		
	Asst:			Vhitman / Joł		•			_ Project N	lumber: 3	30126255	
_ogge			David (			Sampli	-		_ ,			
Editor:			<u>Sean N</u>	<u>AcGrane</u>		Conve	rted to	Vell: 🗌 Yes 🔀 TBD				1
Depth (ft)	Recovery (ft)		Sieve nple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
		97- 4/25	2A-SS- -102 //2022 2:35					(97-107 ft) Topock - Competent Bedrock - Me grayish green (5GY 3/2); pulverized by drilling		dark		
_102 _103 _ _104	10	102	2A-SS- 2-107		Topock - Competent Bedrock - Metadiorite	IN/A				¥		
_105 _106 _ _107			/2022 2:40					8			(105.0 - 107.0') Soft drilling	(105.0 - 107.0') No drilling flu used
_108_ _109_ _110_ _110_ _ _111_ _ _111_ _	5	107 4/25	2A-SS- -112 /2022 2:45	No Sample (Interval did not produce) 4/21/2022 16:36	Topock - Competent Bedrock - Metadiorite	IN/A		(107-112 ft) Topock - Competent Bedrock - N grayish green (5GY 3/2); pulverized by drilling	letadiorite; ver	y dark		
_ _113 _114 _115 _ _116 _	5	112 4/25	2A-SS- 2-117 /2022 2:50		Topock - Competent Bedrock - Metadiorite	IN/A		(112-117 ft) Topock - Competent Bedrock - M grayish green (5GY 3/2); pulverized by drilling (116-116.5 ft) Pulverized rock becoming sligh potentially weathered conglomerate.	j process.			
_117 _118 _118 _119 _120	5	117 4/25 12	2A-SS- -122 /2022 2:55	FW-02A- VAS-117- 122 (<0.025 ppb) 4/22/2022 12:19	Topock - Competent Bedrock - Metadiorite			(117-122 ft) Topock - Competent Bedrock - M grayish green (5GY 3/2); pulverized by drilling	j process.			
								eet, bgs = below ground surface, am				
								n, Notes: Solid blue and hollow blue				
JUS. H	n St GU			ction of sedim	-			ed during the first VAS interval, respe	-ouvery. Αρ	parent pa		is can be li

9	<u>AF</u>	<u>20</u>	۱ <u>D</u>	S		Bc	pring	l Log		Sheet: 7 of	10
Date S	tarted	:	03/31/	2022			e Eleva		Borina Na	b.: <u>FW-02A</u>	
	•		04/26/				g (NAE		_		
Drilling			<u>Casca</u>			-	(NAD		Client: <u>PG&amp;</u>		
Drilling				Drilling		Total D	•	<u>182 ft bgs</u>	•	GW Remedy Ph	
Drill Rie	·			<u>_ongyear drill</u>			le Dian		Location: PG&	<u>E Topock, Need</u>	les Californ
Driller I				Vasquez		•		Water: <u>93.0 ft bgs</u>			
Drilling				<u>Vhitman / Jo</u>		•	•		Project Numbe	r: <u>30126255</u>	
.oggei Editor:				<u>Cornell</u> McGrane		•	ng Inte ted to <sup>v</sup>		-		
	>		ocarri		-						
Depth (ft)	Recovery (ft)		lieve nple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
_		FW-0	2A-SS-	FW-02A- VAS-117-	Topock -		$\left  \right $	(117-122 ft) Topock - Competent Bedrock - Me grayish green (5GY 3/2); pulverized by drilling			
_121	5	117	-122 /2022	122	Competent Bedrock -	N/A	$\left( \right)$				
			:55	(<0.025 ppb) 4/22/2022	Metadiorite		$\left( \right) \right)$				
122				12:19			$\left( \right)$	(400.407.ft) Tanaali, Carrierterte Dadarth M	ta di anitar como dante	(122.0	(100.0
_							$\left( \right)$	(122-127 ft) Topock - Competent Bedrock - Me greenish gray (5G 3/2); pulverized by drilling p		(122.0 - 127.0')	(122.0 - 127.0')
123_							$\left( \right)$			Rough drilling	No drilling flu used
_							$\langle \rangle$				
124		FW-0	2A-SS-		Topock -		$\left( \right)$				
-	5		-127 /2022		Competent Bedrock -	N/A	$\left( \right)$				
125_			:00		Metadiorite		$\left( \right)$				
_							$\left( \right)$				
126							$\left( \right)$				
_							$\left( \right)$				
_127							× × ×	(127-130 ft) Topock - Weathered Bedrock - Co	nglomerate: dark	(127.0 -	(127.0 -
_							$\times \times $	yellowish brown (10YR 3/6); pulverized by dril	ling process;	132.0')	`132.0')
_128		FW-0	2A-SS-		Topock -		× × × × × ×	potentially weathered based on drilling observation	ations.	Rough drilling	No drilling flu used
_			-130 /2022		Weathered Bedrock -	N/A	$\times \times \times$				
129_			:05	FW-02A- VAS-127-	Conglomerate	<b>U</b>	$\times \times \times$ $\times \times \times$				
_	5			132 (<0.025 ppb)			× × × × × × × × ×				
_130				4/23/2022 09:50			x x x	(130-132 ft) Topock - Weathered Bedrock - Me	etadiorite: verv dark		
_			2A-SS-	00.00	Topock -		$\left( \right)$	greenish gray (5G 3/2); pulverized by drilling p			
_131			-132 /2022		Weathered Bedrock -	N/A	$\left( \right)$				
_		13	:10		Metadiorite		$\left( \right)$				
_132							× × ×	(132-136.5 ft) Topock - Weathered Bedrock -	Conglomerate: dark	(132.0 -	(132.0 -
-							$\times \times \times$ $\times \times \times$	yellowish brown (10YR 3/6); fragmented by dri	lling process.	137.0') Rough drilling	137.0') No drilling flu
_133							$\begin{array}{c} \times \times \times \\ \times \times \\ \times \times \end{array}$				used
-					Tenesti		$\times \times \times$				
_134		132-	2A-SS- 136.5		Topock - Weathered	N/A	× × × × × × × × ×				
-	5		/2022 :15		Bedrock - Conglomerate		$\times \times $				
_135							$\times \times \times$ $\times \times \times$				
-							× × × × × × × × ×				
_136											
-					Topock -	N/A	X X X	(136.5-137 ft) Topock - Weathered Bedrock -			
_137		1			Weathered Bedrock -			grayish olive (10Y 4/2); pulverized by drilling p weathered based on drilling observations.	ocess; potentially		
-		EW O	2A-SS-	FW-02A-	Metadiorite			(137-142 ft) Topock - Weathered Bedrock - Me	etadiorite; dark		
_138		136.	5-142	VAS-137-	Topock - Weathered			grayish olive (10Y 4/2); pulverized by drilling p weathered based on drilling observations.	ocess; potentially		
400	5	4/25/	/2022 :20	142 (<0.025 ppb)	Bedrock -	N/A		-			
_139				4/23/2022 15:44	Metadiorite						
-											
140 \bbre\	iation	ร: ปร	SCS = I	Jnified Soil C	lassification	Svster	n. ft = f	eet, bgs = below ground surface, ams	sl = above mean	sea level. NR = I	No Recove
								n, Notes: Solid blue and hollow blue v			
		•		<u> </u>				ed during the first VAS interval, respe		<u> </u>	
					nents in the						

9		<b>C</b> A	<u>DI</u> S	S		Bo	oring	l Log		She	et: 8 of	10
Date S			3/31/2			Surface			Borin	g No.:	FW-02A	
		eted: <u>04</u>				Northin			-			
Drilling			ascad			Easting		-	Client:	PG&E		
Drilling Drill Riq			onic D	orilling Dingyear drill		Total D Borehc	•	<u>182 ft bgs</u> neter: <u>6-7 inches</u>	Project:		V Remedy P opock, Need	
Driller N				asquez				Water: <u>93.0 ft bgs</u>		FGQL I	UPUCK, NEEL	
Drilling				<u>hitman / Joh</u>		•			- Proiect N	umber: 3	30126255	
Logger				ornell		Sampli	-					
Editor:		Se	ean M	cGrane		Conver	-		_			
Depth (ft)	Recovery (ft)	Siev Sampl		Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
 _141  _142_	5	FW-02A- 136.5-1 4/25/20 13:20	42 22	FW-02A- VAS-137- 142 (<0.025 ppb) 4/23/2022 15:44	Topock - Weathered Bedrock - Metadiorite	N/A		(137-142 ft) Topock - Weathered Bedrock - Me grayish olive (10Y 4/2); pulverized by drilling pu weathered based on drilling observations.	etadiorite; dar rocess; poten	k tially		
142 143 144 144 145 146 146 147	10	FW-02A- 142-14 4/25/20 13:25	7 22		Topock - Weathered Bedrock -	N/A		(142-152 ft) Topock - Weathered Bedrock - Me (5Y 4/2) with dark yellowish brown (10YR 3/4); process; potentially weathered based on drillin	pulverized by	/ drilling		
		FW-02A- 147-15 4/25/20 13:30	52 22	FW-02A- VAS-147- 152 (<0.025 ppb) 4/24/2022 12:20	Metadiorite	hered N/A		61			(149.0 - 152.0') Soft drilling	(149.0 - 152.0') No drilling fluid used
	10	FW-02A- 152-15 4/25/20 13:35	A-SS- 157 1022		N/A		(152-162 ft) Topock - Weathered Bedrock - Me (5Y 4/2) with dark yellowish olive (10YR 3/4); process; potentially weathered based on drillin	oulverized by o	drilling	(152.0 - 162.0') Soft drilling	(152.0 - 162.0') No drilling fluid used	
 158  159  160		FW-02A- 157-16 4/25/20 13:40	52 22 )	FW-02A- VAS-157- 162 (<0.025 ppb) 4/25/2022 10:25								
								eet, bgs = below ground surface, ams				
		-		-				n, Notes: Solid blue and hollow blue v				
÷ ,								ed during the first VAS interval, respe	ctively. App	parent pa	rtial recoverie	s can be the
÷ ,				n logging an ion of sedim				ea auring the first VAS interval, respe	ctively. App	parent pa	ruai recoverie	es can be th

AP	RC/	٩DI	S		Bo	oring	Log		She	et: 9 of	10
Date Starte	ed:	03/31/2	2022		Surface			Boring	No.:	FW-02A	
Date Comp					Northin				-	<u></u>	
Drilling Co.		Casca			Easting	•			PG&E		
Drilling Met		Sonic I	•		Total D	•	<u>182 ft bgs</u>	•		V Remedy P	
Drill Rig Ty <sub>l</sub> Driller Nam	-		<u>ongyear drill</u> /asquez		Boreho		eter: <u>6-7 inches</u> Vater: <u>93.0 ft bgs</u>	Location:	PGAEI	opock, Need	lles California
Drilling Ass			Vasquez Vhitman / Joł		•			Project Nu	mber: 3	30126255	
Logger:		David (			Sampli	-		. 1 10,000 140		0120200	
Editor:			/IcGrane		Conver	-					
Depth (ft) Recovery (ft)	Sar	Sieve nple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
	157 4/25	2A-SS- -162 /2022 ::40	FW-02A- VAS-157- 162 (<0.025 ppb) 4/25/2022 10:25	Topock - Weathered Bedrock - Metadiorite	N/A		(152-162 ft) Topock - Weathered Bedrock - Me (5Y 4/2) with dark yellowish olive (10YR 3/4); p process; potentially weathered based on drillin	ulverized by di	illing		
163  164 165 						× × × × × × × × × × × × × × × × × × ×	(162-172 ft) Topock - Weathered Bedrock - Co yellowish brown (10YR 3/4); weathered.	nglomerate; d	ark		
_166_ 16710 168 168 169 170 170 171	San	Sieve pples ected	FW-02A- VAS-167- 172 (<0.13 ppb) 4/25/2022 15:50	Topock - Weathered Bedrock - Conglomerat	N/A	x x x x x x x x x x x x x x x x x x x	(167-169 ft) Metadiorite fragments pulverized t	by drilling proce	255.		
_172 _173 _174 _174 _175 _175 _17610				Topock - Weathered Bedrock - Conglomeral	N/A	× × × × × × × × × × × × × × × × × × ×	(172-177 ft) Topock - Weathered Bedrock - Co (10YR 4/3); weathered.	nglomerate; b	rown	(172.0 - 177.5') Hard drilling	(172.0 - 177.5') No drilling fluid used
_177  _178  _179  			FW-02A- VAS-177- 182 (34 ppb) 4/26/2022 10:55	Topock - Weathered Bedrock - Metadiorite	n/A		(177-181 ft) Topock - Weathered Bedrock - Me (5Y 5/2); pulverized by drilling process; potenti on drilling observations.	ally weathered	based	(177.5 - 180.5') Soft drilling	(177.5 - 180.5') No drilling fluid used
							et, bgs = below ground surface, ams				
			-				, Notes: Solid blue and hollow blue v				
	ncount						ed during the first VAS interval, respe	ctively. Appa	arent pa	rtial recoverie	s can be the
÷ ,			tion of codim	ents in the	core h	ne					

Base Stand     33312022     Surface Elevation     554.11 famal     Boring Not:     EW-02A       Jmiling Americanica     Gald262022     Northing (ND83):     Z614566.44     Client:     PC6AE       Jmiling Co:     Casacade     Facel Complete     Facel Complete     Project:     Facel Complete       Jmiling Netto:     Sonic Dilling     Total Depth     192.1bgs     Location:     Project:     Facel Complete       Jmiling Ast:     John Whitman John Colon     Sompling Interval     Continuous     Location:     Project:     Number:     30125255       Gald     Bard Monty     Sampling Interval     Continuous     Continuous     Continuous       Gald     Bard Monty     Sampling Interval     Visiting Project:     Number:     30125255       Gald     Gald Sample     Continuous     Continuous     Continuous       Gald     Gald Sample     Continuous     Continuous     Continuous       Gald     Gald Sample     Gald Sample     Continuous     Continuous       Gald     Gald Sample     Continuous     Continuous     Continuous       Gald     Gald Sample     Continuous     Continuous     Continuous       Gald Sample     Continuous     Continuous     Continuous     Continuous       Gald Sample	9	AR		S		Bo	orinç	g Lo	g		She	eet: 10 of	10
Date Completed:       04/26/2022       Northing (NAD83):       2100450.05       EDVIDINg Not:	Date S			-		Surface	e Eleva	ation:	554.11 ft amsl	Borin			
Inling Col:       Cascade       Easting (MAD83)       Z61466.44       Client:       PC8E         Inling Mathod       Boart Dogytar utili head       Depth to First Water:       Size Notas       Locaton:       PC6E Togotek, Needles Californi         Orger:       Dadd Carnel       Samping Mathod       Indin X 10h Coro Barral       Project Number:       S01262255         Orger:       Dadd Carnel       Samping Mathod       Yes (X TBD)       Project Number:       S01262255         Sam MCGrane       Contructus       Yes (X TBD)       Yes (X TBD)       Project Number:       Dolling Num       Inling Num         Sampe D       Sampe D       Sampe D       Sampe D       Sampe D       Sampe D       Inling Num       Inling Num         Sampe D       Sampe D       Sampe D       Sampe D       Sampe D       Sampe D       Inling Num       Inling Num         Sampe D       Sampe D       Sampe D       Sampe D       Sampe D       Sampe D       Inling Num       Inling Num         Sampe D       Sampe D       Sampe D       Sampe D       Sampe D       Sampe D       Inling Num       Inling Num	Date C	omple	ted: 04/26/	2022		Northin	ig (NAI	D83):		DOLI	iy ivo	<u> </u>	i
Initing Method:       Sonic Dilling       Total Depth:       182 thgs       Project:       End RN Remoty Phase 2A.         Uniting Name:       Starty Qasquez.       Depth to First Water:       93.0 ft bgs       Location:       Project Number:       30.1262255         Orgen:       Sean McGrane       Converted to Weit:       Its E ToD       Project Number:       30.1262255         Gdor:       Sean McGrane       Converted to Weit:       Its E ToD       Project Number:       30.126275         International Starter       Sean McGrane       Converted to Weit:       Its E ToD       Project Number:       01/102/101         International Starter       Sean McGrane       Converted to Weit:       Its E ToD       Project Number:       01/102/101         International Starter       Sean McGrane       Converted to Weit:       Its E ToD       Project Number:       01/102/101         International Starter       Sean McGrane       Converted to Weit:       Its E ToD       Project Number:       01/102/101         International Starter       Sean McGrane       Converted to Weit:       Its E ToD       Project Number:       01/102/101         International Starter       Sean McGrane       Converted to Main Starter       Project Number:       01/102/101         International Starter       Sean McG		-		de					7614666.44	Client:	PG&E		
Normal Norma       Boart Longyear dill head       Project Number: Slot26255         orget:       Dadd Cornell       Sampling Intervati       Continuous       Continuous       Project Number: Slot262-56       Dilling Networks         10       Ne singe Britering       Sampling Intervation       Continuous       Dolling Networks       Dolling Networks       Dolling Networks         110       Ne singe Britering       NA       Sampling Intervation       Sampling Intervation       Dolling Networks       Dolling Networks         110       Ne singe Britering       NA       Sampling Intervation       Sampling Intervation       Dolling Networks       Dolling Networks         110       Ne singe Britering       NA       Sampling Intervation       Sampling Networks       Networks       Networks       Networks         110       Ne singe Britering       Networks <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td>,</td> <td></td> <td>_</td> <td></td> <td>W Remedy P</td> <td>hase 2A</td>	-					-		,		_		W Remedy P	hase 2A
Inite Name:         Size Vacuuez         Depth to First Water:         93.01 Bgs           Jong Ass:         John Witting John Colon.         Sampling Method:         Convented to Welk         Its Core Barrel         Project Number:         30128255           Janid Cornell         Stan McGrane         Convented to Welk         Its Ear McGrane         Diffing Name:	-			-	head			meter:	•	-			
Initing Ast:         John Whitman John Cobo.         Sampling Method:         A Inch x 10 fl. Core Barrel         Project Number: 30126255           Seam McGrane         Convented to Well:         I res         TBD <u> <u> </u></u>													
ogger:       David Cornel       Sampling Interval:       Converted to Well:       Vis. IT BD					n Colon	-			-	Proiect N	lumber:	30126255	
Calibre         Converted to Well:         V Rs         C TBD           End         Sample D         Converted to Well:         V Rs         Soft Description         Drilling Hule           181         10         Name Calletted         V Rs         V Rs <thv rs<="" th=""> <thv rs<="" th=""> <thv rs<="" th=""></thv></thv></thv>	-						•					00.20200	
B     B <td>Editor:</td> <td>•</td> <td></td> <td></td> <td></td> <td>•</td> <td>•</td> <td></td> <td></td> <td>_</td> <td></td> <td></td> <td></td>	Editor:	•				•	•			_			
181         10         Nu Steele Service Collected         PL/2027. (18) 0.7 (18) 0.7 (1		>			0 5								
181         10         No. Store         198.5.177- (2.94 abid)         NA         100         198.5.177- (198.1.6.17)         198.5.177- (198.1.577- (198.1.577- (198.1.577- (198.1.577- (198.1.577-	Depth (ft)	Recover (ft)			Geologi Formatio	USCS Code	USCS Class					Drilling Notes	Drilling Fluid
Image: Conjection of Control 10:55         Max         Image: Conjection of Control 10:55		10		VAS-177- 182		N/A		(5Y 5/2) on drillir	; pulverized by drilling process; poten ng observations.	tially weathere	d based	(180.5 - 182.0')	
		10		4/26/2022	Weathered Bedrock -	1.07.1	× × × × × × × × × × × ×	(10YR 4	//3);́ weathered.	conglomerate;	brown		No drilling fluid
	- $        -$	iations			assification	n Sveter	$\overline{n}$ ft =	fact bo					
Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Recovery						-		-					
V/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks represent depth to water (ft				-									
ogs.) first encountered from logging and depth to water measured during the first VAS interval, respectively. Apparent partial recoveries can be the esult of potential compaction of sediments in the core bag.	- ·				-			red duri	ng the first VAS interval, resp	ectively. Ap	parent pa	artial recoverie	es can be the

ARC	<u>ADI</u>	S		Bo	oring	j Log	9		She	et: 1 of	10
ate Started:	03/31/	2022		Surfac			554.11 ft amsl	Borin	a No.:	FW-02A	Pilot
ate Completed:				Northir			2100450.05	_		<u></u> .	
Prilling Co.:	<u>Casca</u>			Easting		83):	7614666.44	Client:	PG&E		
rilling Method:	<u>Sonic</u>	•		Total D	•		182 ft bgs	Project:		N Remedy Pl	
orill Rig Type:		<u>_ongyear drill</u>	head	Boreho			6-7 inches	_ Location:	<u>PG&amp;E 1</u>	opock, Need	lles Californi
oriller Name:		Vasquez	0.1	•			93.0 ft bgs	- Duciest N		0400055	
orilling Asst:		<u>Vhitman / Joh</u> Cornell		Sampli	-		4 inch x 10 ft. Core Barrel		umper: <u>.</u>	30120200	
ogger: ditor:		VcGrane		•	rted to \		Continuous ☐ Yes ⊠ No	-			
	Jean					vven.					
Cepth (ft) (ft) (ft)	Sieve ample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
_10_ <b>_</b>	Sieve	No Groundwater Samples Collected	Alluvium Deposits	SW-SM		brown (7 subroun little sma granules (10-17 ff (7.5YR 3 subroun little sma granules (17-19 ff (7.5YR 3 grained, angular angular	Well graded sand with silt and gravel <i>Y</i> .5YR 3/3); very fine to very coarse grading all to large cobbles, angular to subang s, angular to subangular; trace clay; drawn with the subangular to very coarse grained, s d; little small to very large pebbles, and all to large cobbles, angular to subang s, subangular to subround; trace clay; drawn with the subangular to subround; trace clay; drawn with the subangular to subround; trace clay; drawn with the subangular to subround; trace subangular to subang s, subangular to subround; little small to to subangular; trace granules, angular to subangular; trace granules, angular to moist.	I (SW-SM); b ular; little silt;	rown ngular; trace	(0.0 - 5.0') Air-knifed for utility clearance on 3/31/22.	(0.0 - 5.0') No drilling flui used
_19			Topock - Alluvium	SM		,, <b>,</b>					
20 bhreviations: U	SCS = 1	Inified Soil Cl	Deposits	n Sveter	<u> </u>	feet ha	s = below ground surface, ams	s = ahove	mean se	alevel NR -	No Recover
							s - below ground surface, and s: Solid blue and hollow blue v				
		-					ng the first VAS interval, respe				
• /		ction of sedim	-			eu uuri	ny the list vas litterval, respe	ouvery. App	ланени ра		s can be lh

ARC	AD	S		Bc	oring Lo	g		Sheet: 2 of	10
Date Started:	<u>03/31/</u>				e Elevation:	<u>554.11 ft amsl</u>	Boring No	b.: <u>FW-02A</u>	Pilot
ate Completed:					g (NAD83):	2100450.05	_		
Prilling Co.:	<u>Casca</u>			-	(NAD83):	7614666.44	_ Client: <u>PG&amp;</u>		
Prilling Method:		Drilling		Total D	•	<u>182 ft bgs</u>	-	GW Remedy P	
Drill Rig Type:		<u>Longyear drill</u>	head		le Diameter:	<u>6-7 inches</u>	_ Location: <u>PG&amp;</u>	E Topock, Need	les Californ
Driller Name:		Vasquez Nhitman / Joł			to First Water				
Drilling Asst:				-	-	4 inch x 10 ft. Core Barrel	_ Project Numbe	r. <u>30126255</u>	
.ogger: Editor:		Cornell McGrane		-	ng Interval: ted to Well:	<u>Continuous</u> ☐ Yes ⊠ No	_		
Depth (ft) (ft) (ft) (ft)	Sieve ample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
_21			Topock - Alluvium Deposits	SM	<ul> <li>fine to small the large case of the second se</li></ul>	<ul> <li>ft) Silty sand with gravel (SM); very dar very coarse grained, angular to subang o very large pebbles, angular to subang obbles, angular to subangular; trace gr jular; trace clay, dry to moist.</li> <li>ft) Well graded sand with silt and grav ay (7.5YR 3/1), little dark brown (7.5YF grained, angular to subangular; little silt; trace s, angular to subangular; trace granule jular; trace clay; dry to moist.</li> </ul>	rel (SW-SM); very & 3/3); very fine to very mall to very large e small to large	(25.0 - 27.0') Rough drilling	(25.0 - 27.0' No drilling flu used
.30	lo Sieve amples ollected	Topock - Alluvium Deposits	SM-SW				(31.0 - 37.0') Rough drilling	(31.0 - 37.0' No drilling flu used	
.37 .38 .39 .40	USCS = Unified Soil Classification				ittle da	ft) Silty sand with gravel (SM); very dar rk brown (7.5YR 3/3); fine to coarse gr jular; little silt; little small to very large jular; trace small to large cobbles, ang ranules, angular to subangular; trace c	ained, angular to bebbles, angular to ular to subangular;	(37.0 - 42.0') Rough drilling	(37.0 - 42.0' No drilling flu used
bbreviations: L				-		· · · · · · · · · · · · · · · · · · ·			
		۸/ مربع مار م	ator nnh -	norte n	or hillion Not	es: Solid blue and hollow blue	water table marks	roprocont dont	n to water (f
/A = Not Applic	able, Gv	w = groundwa	arei, hhn -	parts p				represent dept	i to water (

<b>P</b> /-	٩R	<u>CAD</u>	IS		BC	oring	l <mark>Lo</mark> g			She	et: 3 of	10
Date Sta			/2022		Surface			554.11 ft amsl	Borin	g No.:	FW-02A	Pilot
ate Co	•		<u>6/2022</u>		Northin			2100450.05	-	-		
Orilling C		<u>Casc</u> d· Sonic			Easting	•		7614666.44	Client:	PG&E	V Remedy Pr	200 24
Drilling N Drill Rig			<u>: Drilling</u> : Longyear drill		Total D Boreho	•		<u>182 ft bgs</u> 6-7 inches	Project:		opock, Need	
Driller Na			Vasquez	<u>iieau</u>				93.0 ft bgs		FOREI	OPOCK, NEEU	
Drilling A			<u>, vasquez</u> Whitman / Joł	n Colon	•			4 inch x 10 ft. Core Barrel	- Proiect N	umber: :	30126255	
_ogger:			Cornell		Sampli	-		Continuous	_ 110,00011		0120200	
Editor:			McGrane		Conver	•		Yes X No	-			
	≥											
Depth (ft)	Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
_							little dark	Silty sand with gravel (SM); very darl brown (7.5YR 3/3); fine to coarse gra	ained, angular	to		
_41								ar; little silt; little small to very large p ar; trace small to large cobbles, angu				
_							trace gra	nules, angular to subangular; trace cl	ay; dry to moi	st.		
_42												
-												
_43				Topock -								
_	10			Alluvium	SM							
_44				Deposits								
_45												
_43												
_46												
_47												
								Well graded sand with silt and grave 5YR 3/3), little very dark gray (7.5YR				
_48							coarse q	ained, angular to subangular; little sr angular to subangular; little silt; trace	nall to very la	ge		
							cobbles,	angular to subangular; trace granules ar; trace clay; dry to moist.				
_49							subanyui	ar, trace clay, dry to moist.				
_		N. 0	No									
_50		No Sieve Samples	Groundwater Samples									
_		Collected	Collected									
_51												
				Topock -								
_52	10			Alluvium Deposits	SM-SW							
				Dopoono								
_53												
_54_												
											(54.0 - 57.0') Rough drilling	(54.0 - 57.0') No drilling flui
_55_												used
. ]												
_56_												
. 4												
_57							(57-67 #\	Well graded sand with silt and grave	I (SW-SM) - 4	ark		
							brown (7.	5YR 3/2); very fine to very coarse gra	ined, angular	to		
_58				Topock -			small to l	ar; little silt; trace granules, angular t arge cobbles, angular to subangular;	trace small to	very		
	10			Alluvium	SW-SM		iarge peb	bles, angular to subangular; trace cla	ay; dry to mois	t.		
_59_				Deposits								
60   bbrevia	ations	USCS =	Unified Soil Cl	assification	n Svster	<u>⊮`•`⊧ĭ•ľ4</u> n. ft = f∉	eet. bas	= below ground surface, am	sl = above i	nean sea	i a level. NR = I	No Recover
								: Solid blue and hollow blue				
			v				-	g the first VAS interval, respe				
<u> </u>			action of sedim	-				· •		•		

ARC	<u>ADI</u>	S		Bc	pring	g Log	9		She	et: 4 of	10
Date Started:	<u>03/31/</u>			Surface			554.11 ft amsl	Borin	g No.:	FW-02A	Pilot
Date Completed:				Northin			2100450.05	-	-		
Drilling Co.: Drilling Method:	<u>Casca</u>			Easting Total D		83):	7614666.44 182 ft bgs	Client: Project:	PG&E	N Remedy P	haso 2A
Drill Rig Type:		<u>_ongyear drill  </u>		Boreho	•	notor	6-7 inches	-		Topock, Need	
Driller Name:		<u>longycar un⊪</u> Vasquez					93.0 ft bgs				
Drilling Asst:		<u>Vasquez</u> Vhitman / Joh	n Colon	•			4 inch x 10 ft. Core Barrel	- Proiect N	umber: :	30126255	
_ogger:	David			Sampli	•		Continuous	_ 1 10,00011		00120200	
Editor:		AcGrane		Conver	•		☐ Yes ⊠ No	-			
	Sieve mple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
_ <sup>/0</sup> Sa	Sieve nples lected	No Groundwater Samples Collected	Topock - Alluvium Deposits Topock - Alluvium Deposits Topock - Alluvium Deposits	SW-SM SW-SM ML SW		brown (7 subangu small to large pee (60.5-61 moderat granules (67-68.5 (7.5YR 4 subroum little gran subroum (70-77 ft fine to cu to subrou trace sm clay; dry	) Well graded sand with silt and grave / SYR 3/2); very fine to very coarse gra lar; little silt; trace granules, angular, the large cobbles, angular to subangular; trace cla ft) Lens of brown (7.5YR 4/2); silt and e plasticity; little very fine to medium ( and small pebbles; moist. ft) Well graded sand with silt and gra W/2); very fine to very coarse grained, s d; little small to very large pebbles, an nules, angular to subangular; little silt; large cobbles, angular to subround; m ft) Sandy silt (ML); brown (7.5YR 4/2) /, some clay, low to medium plasticity, to medium sand, angular to subround; it und; little small to very large pebbles, an subround; trace small to large pebbles, in the sand with gravel (SW); to medium sand, angular to subround; lit und; little small to very large pebbles, sall to large cobbles, angular to subround; to moist.	vel (SW-SM); yrained sand; race small to yr, dry to mois l clay; low to grained sand; vel (SW-SM); ubangular to gular to subro little clay; tra- oist. ; no plasticity, tra- oist. brown (7.5YF the granules, a gular to sub ind; trace silt;	to trace overy t. trace brown und; ce no little es, b c (4/4); angular pround; trace	(64.0 - 66.0') Drill rods chattering	(64.0 - 66.0 No drilling flu used
_79			Deposits								
							s = below ground surface, ams				
							s: Solid blue and hollow blue v			• • •	
	tered fro	om logging an	d depth to	water i	measur	red durii	ng the first VAS interval, respe	ctively. App	arent pa	rtial recoverie	es can be th

	<u> </u>	<u>ADI</u>	5			pring	•		Shee	t: 5 of	10
ate Starte		03/31/			Surface			- Boring N	o.:	FW-02A	Pilot
ate Comp		04/26/			Northir			_			
rilling Co.:		<u>Casca</u>			Easting			_ Client: <u>PG8</u>			
rilling Met			Drilling		Total D	•	<u>182 ft bgs</u>	•		Remedy Pl	
rill Rig Typ			<u>Longyear drill</u>	head	Boreho			_ Location: <u>PG8</u>	<u>LE To</u>	opock, Need	les Californ
riller Nam			Vasquez		•		Vater: <u>93.0 ft bgs</u>				
rilling Ass	:		<u>Nhitman / Joł</u>	nn Colon		-		_ Project Numbe	er: <u>3(</u>	0126255	
ogger:			<u>Cornell</u>		Sampli	•		_			
ditor:		<u>Sean I</u>	McGrane		Conve		/ell: 🗌 Yes 🔀 No				
(ft) (ft) Recovery (ft)	Sar	Sieve nple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
81 82 83 83 84 85 85 86 87 88 906 91	Sar	Sieve nples ected	No Groundwater Samples Collected	Topock - Alluvium Deposits Topock - Alluvium Deposits	SW SW		<ul> <li>77-87 ft) Well graded sand with gravel (SW) yery fine to very coarse grained, angular to subargular; little small to large or subangular; trace sitt; trace small to large or subangular; trace sitt; trace clay; dry to moist (86-87 ft) Decrease in pebble content.</li> <li>(87-88 ft) Well graded sand with gravel (SW) 3/4); fine to coarse grained, subangular to subangular, trace small to large cobles, angular to subangular, trace small to large cobles, angular to subangular; trace small to large cobbles, angular to subangular; trace small to large cobles, angular; trace small to larg</li></ul>	ibangular; little o very large pebbles, obbles, angular to ; dark brown (7.5YR bround; little granules pebbles, angular to jular to subround; vn (7.5YR 3/4); very und; trace granules, to very large pebbles, ubbles, angular to		(88.0 - 93.0') Difficult drilling and core retrieval. (90.0 - 93.0') Rough drilling	(88.0 - 93.0' No drilling flu used (90.0 - 93.0' No drilling flu used
92 92 93 94 94 95 4 96 97 98 99 10	93. 4/25 12 FW-0 97 4/25	2A-SS- 5-97 /2022 ::30 2A-SS- 102 (2022) ::35	No Sample (92-97 interval did not produce) 4/21/2022 08:55	Topock - Alluvium Deposits Topock - Alluvium Deposits Topock - Competent Bedrock - Metadiorite	N/A		93-93.5 ft) Well graded (SW); brown (7.5YR grained, subangular to subround; trace silt; tr (93.5-97 ft) Well graded sand with gravel (SV 3/4); very fine to very coarse grained, angular small to very large pebbles, angular to subro angular to subround; little small to large cobt subangular; trace silt; trace clay; dry to moist (96-97 ft) Potentially pulverized Metadiorite. (97-107 ft) Metamorphic Rock; very dark gray bulverized by drilling process.	ace clay; wet. V); dark brown (7.5YF to subround; little und; little granules, les, angular to			
	"					$\sim$					
100						$\square$					
	ns: US	SCS = I	Unified Soil C	assification	n Syster	m, ft = 1	et, bgs = below ground surface, an	nsl = above mean	i sea	level, NR = I	No Recove
							, Notes: Solid blue and hollow blue				
			· ·				d during the first VAS interval, resp				
1S.) TIrst ei											

91	٩R	2CA	D	S			oring	•		She	et: 6 of	10
Date St			<u>3/31/2</u>				e Elevatio		Borin	g No.:	FW-02A	Pilot
Date Co	-		4/26/2					•	_	PG&E		
Drilling ( Drilling			ascad	be Drilling		±asung Fotal D	(NAD83	<u>182 ft bgs</u>			V Remedy P	haaa 2A
Drill Rig				ongyear drill			le Diame	•	-		opock, Need	
Driller N				/asquez				iter: <u>93.0 ft bgs</u>			opock, Need	
Drilling				Vhitman / Joł		•			_ _ Project N	umber: '	30126255	
_ogger:				Cornell		-	ng Interv				50120200	
Editor:				/IcGrane			ted to W		_			
_	≥				in i							
Depth (ft)	Recovery (ft)	Sie Samp		Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		( 0.10)	Drilling Notes	Drilling Flui
_ _101 _		FW-02A 97-10 4/25/20 12:3	02 022					-107 ft) Metamorphic Rock; very dark gray verized by drilling process.	vish green (5GY	3/2);		
102								.6				
103					Topock -							
-	10				Competent Bedrock -	N/A				¥		
_104		FW-02A	-SS-		Metadiorite							
405		102-1 4/25/20	022									
105		12:4	0								(105.0 -	(105.0 -
400											107.0') Soft drilling	107.0') No drilling flu
106												used
407												
_107								7-112 ft) Metamorphic Rock; very dark gra	yish green (5G	Y 3/2);		
100							F	verized by drilling process.				
108												
_109				No Sample								
_103	-	FW-02A 107-1		(107-112 interval did	Topock - Competent							
110	5	4/25/20 12:4	022	not produce) 4/21/2022	Bedrock - Metadiorite	N/A						
		12.7	0	16:36	Wetadionte							
_111_												
112												
								2-117 ft) Metamorphic Rock; very dark gra verized by drilling process.	ayish green (5G	Y 3/2);		
113_												
114		FW-02A			Topock -							
	5	112-1	17		Competent	N/A						
115_	-	4/25/20 12:5	022		Bedrock - Metadiorite							
4												
_116									the state in the second	.		
_								6-116.5 ft) Pulverized rock becoming sligh entially weathered conglomerate.	iuy pink in coloi	,		
_117								7-122 ft) Metamorphic Rock; very dark gra	wish groop (50	V 3/2)·		
4								verized by drilling process.	gian green (30	· J/Z),		
_118		FW-02A	-SS-	FW-02A- VAS-117-	Topock -							
4	5	117-1 4/25/20	22	122 (<0.025 ppb)	Competent Bedrock -	N/A						
_119		12:5	5	4/22/2022 12:19	Metadiorite							
-				12.13								
120	iation		2°	Inified Seil C	lassification	Suntar	$rac{1}{rac}{1}{rac{1}{rac}{1}{rac{1}{rac}{1}{rac{1}{rac{1}{rac{1}{rac{1}{rac{1}{rac{1}{rac}{1}{rac{1}{rac{1}{rac}{1}{rac{1}{ra$	has - holow around surface		noon ac		
								, bgs = below ground surface, an Notes: Solid blue and hollow blue				
								during the first VAS interval, resp				
<u>dS.1 m</u>										pa		

Dec Completed:     04/26/2022     Northing (ND03);     2100450.05     DUITING (Not:     PCRAFTIDU       Initing Method:     Sonic Duilling.     Total Depth:     182.1 bgs.     Project:     Enal GW Remedy Phase 22       Initing Nethod:     Sonic Duilling.     Total Depth:     182.1 bgs.     Location:     PCSET Topook. Needles Call       Initing Nethod:     Sonic Duilling.     Total Depth:     182.1 bgs.     Project:     Enal GW Remedy Phase 22       Depth of SW Mark     Bornhole Dumeter:     62.0 hbgs.     Continuous     Dotal Portice     Dotal Portice       Stat Department     Sam McGrane     Converted to Well:     Yes is No     Project:     Dulling Node     Dulling Node       Stat Department     Sam McGrane     Converted to Well:     Yes is No     Sal Department of the first Water     Project:     Proje	ARC	CADI	S		Bc	oring Lo	og	Sh	eet: 7 of	10
Jate Complete:       04/26/22/2       Northing (NAD83)*       2/00/20 Utc       Clent:       FG466.4	Date Started:	03/31/	2022					Borina No.	: FW-02A	Pilot
Nilling Method: Sonic Dilling, Total Depth: 132. Lbgs. Project: Final GW Remody Phase 22 bioler Name: Sonic Dolling, and the depth to First Water. 93.0 ft bgs. Location: PG&E Topock, Needles Call Dilling and Comell. Sampling Method: A final At 0 ft. Core Barrel Method: Sampling Method: Continuous Contin	•					. ,		_		
Diff RG Type:       Boart Longvest diff head       Borchole Dimeter:       6-7 Indies       Location: PG&E Topock, Needles Califier         Differ Name:       Stere Vassuez       Depth for First Water:       90.1 fbgs       Project Number: 30126255         David Cannell       Sampling Method:       4 Indi x 10.ft. Care Barrel       Project Number: 30126255         Ggge:       David Cannell       Sampling Method:       4 Indi x 10.ft. Care Barrel       Project Number: 30126255         Ggge:       David Cannell       Sampling Interval:       Continuous       Onning Note       Drining Note         121       5       Sample D       Continuous       Sail Description       Drining Note       Drining Note         122       5       Sample D       Continuous       First All Sail       Sail Description       Drining Note       Drining Note         123       5       First All Sail       Reader Name       Na       First All Sail       First All Sail       First All Sail         124       5       First All Sail       First All	-				-					
Inter Name:       State Vacuues       Depth to First Water:       93.0 ftsgs       Project Number:       30126255         ogger:       David Cornel       Sampling Method:       Continuous       Project Number:       30126255         dato:       To poot.       Converted to Walt:       Yes       No         121       5       Sample D       Converted to Walt:       Yes       No         122       5       Sample D       Converted to Walt:       Yes       No         122       5       Sample D       Converted to Walt:       Yes       No         123       5       Sample D       Converted to Walt:       Yes       No         124       5       Sample D       Converted to Walt:       Yes       Na         124       5       Sample D       Converted to Walt:       Yes       Yes       Na         124       5       Sample D       Converted to Walt:       Na       Project:       Na         124       5       Fw.d2A-SS       Topoot:       Na       Project:       Na       Project:       Proj	•		•			•	0	•	•	
John Ming Ass:       John Withinan / John Colon.       Sampling Method:       A Ind. X 10 ft. Core Barrel       Project Number:       20120255         orger:       David Cornell       Sampling Interval:       Continuous       Yes       No			•••					_ Location: <u>PG&amp;E</u>	<u>Topock, Need</u>	<u>les Californi</u>
Logge:         David Cornell         Sampling Interval:         Continuous           Editor:         Sean MoGrane         Converted to Well:         Yes (X) No           121         S         Sampling ID         Grouphert Sampling ID         Grouphert Sampling ID         Sig (S) (S) (S) (S) Sampling ID         Sid Description         Datiting Notes         Ditting Notes           122         S         S         Topock- Sampling ID         Topock- Sampling ID         NA         (117.1122 ft) Metamorphic Rock, very dark greeninh gray (SG 32); Salveticed by dilling process.         Figure (SG 32); Sa					•					
Editor:       Sean McGrane       Converted to Well:       Ves       No $\frac{6}{9}$ $\frac{5}{96}$ sample D       Groundhelle sample D $\frac{5}{98}$ $\frac{6}{98}$ $\frac{5}{98}$ Soil Description       Dniling Notes       Dniling Notes         1/2       -       -       - $\frac{7}{12000000000000000000000000000000000000$	•				-	-		Project Number:	30126255	
$\frac{2}{36}$ Serve D       Groundware many Sample ID       Drilling Notes       Driling Notes					-	-		-		
121         5         Topock- Barcock         NA         (17-122 h) Metamorphic Rock very dark graysh green (56Y 32); pulseized by drilling process.         (122-07)         (122-07)         (122-07)           122         5         122-172         (122-17)         (122-17)         (127-122 h) Metamorphic Rock very dark green sh gray (56 32); pulseized by drilling process.         (122-07)         (122-07)         (122-07)         (122-07)           124         5         122-172         (122-07)         (127-08)<		Sean I			Jonver	ted to vvell:	⊥ Yes ⊠ No			
121         5         Topock- Badrock         N/A         polverized by drilling process.         (122.127 ft) Melamorphic Book, with dark grownish gray (5G 32): polverized by drilling process.         (122.127 ft) Melamorphic Book, with dark grownish gray (5G 32): polverized by drilling process.         (122.127 ft) Melamorphic Book, with dark grownish gray (5G 32): polverized by drilling process.         (122.127 ft) Melamorphic Book, with dark grownish gray (5G 32): polverized by drilling process.         (122.127 ft) Melamorphic Book, with dark grownish gray (5G 32): polverized by drilling process.         (127.0 ft) ft         (127.0 ft) ft           128.         FW-02A-SS- 132.0 ft         Topock- Meladorite         N/A         (127.130 ft) Sedimentary Book, dark velowish brown (10/R 346): ft         (127.0 ft) ft         (127.0 ft) ft         (127.0 ft) ft           128.         FW-02A-SS- 133.0 ft         FW-02A-SS- (20.3002)         Topock- Weathered Badrock - ft         (127.130 ft) Sedimentary Book, dark velowish brown (10/R 346): ft         (127.0 ft) ft	Depth (ft) (ft) (ft)			Geologic Formation	USCS Code		•		Drilling Notes	Drilling Fluid
-         -								ish green (5GY 3/2);		
122         Metadionte         (122.127.10) Metamorphic Rock: very dark greenish gray (5G 3/2);         (122.0)	_1215				N/A					
123         5         FW-02A-SS- 122-127         Topock- Competent 132-00         Topock- Competent Bertook         127         128         127         128         128         128         128         129         127         128         128         129         128         129         120         127         128         128         128         129         128         128         128         129         128         129         128         128         129										
123     123     127     128     127     127     127     127     127     128     127     127     127     127     127     127     127     127     127     127     127     127     127     127     127     127     127     127     128     127     127     127     127     127     127     127     128     127     128     127     127     128     127     128     127     128     127     128     127     128     127     128 <td>_122</td> <td></td> <td></td> <td></td> <td></td> <td>(122-</td> <td>127 ft) Metamorphic Bock: very dark gree</td> <td>enish grav (5G 3/2)</td> <td>(122.0 -</td> <td>(122.0 -</td>	_122					(122-	127 ft) Metamorphic Bock: very dark gree	enish grav (5G 3/2)	(122.0 -	(122.0 -
124       5       FW-02A-SS. 122/127       Topock-t Compared. 132/127       NA       Topock-t Compared. MA       NA       Image: Compared. Compared. MA       NA       Image: Compared. Compared. MA       NA       Image: Compared. Compared. MA       NA       Image: Compared. Compared. MA       Image: Compared. Compared. MA       Image: Compared. Compared. MA       Image: Compared. Compared. MA       Image: Compared. Compared. MA       Image: Compared. Compared. MA       Image: Compared. MA       Image:	_					pulve	rized by drilling process.	,	`127.0')	127.0') No drilling flu
125       5       Fiv-22-172       Composition Boundary Book - Matadonie M/A       M/A       Composition Boundary Book - Matadonie M/A       M/A       Interview Boundary Book - Matadonie M/A       Interview Book - Matadonie Bo	_123									used
125       5       FW-02A-SS- 127-130       Composite Weathered 132-0       N/A       Image: Composite Metadionte       N/A       Image: Composite Metadionte       N/A         126       -										
125       5       4/25/2022       Bedrock - MA		W-02A-SS-								
126       127       128       127/130       127					N/A					
127     128     FW-02A-SS- 127-132     (127-130 ft) Sedimentary Rock, dark yellowish brown (10YR 3/6): putwinzed by afiling process; potentially weathered based on 425/002     (127-130 ft) Sedimentary Rock, dark yellowish brown (10YR 3/6): putwinzed by afiling process; potentially weathered based on 425/002     (127-130 ft) Sedimentary Rock, dark yellowish brown (10YR 3/6): 132     (127-130 ft) Sedimentary Rock, dark yellowish brown (10YR 3/6): 132     (127-130 ft) Sedimentary Rock, dark yellowish brown (10YR 3/6): 132     (127-130 ft) Sedimentary Rock, dark yellowish brown (10YR 3/6): 132     (130-132 ft) Metamorphic Rock; very dark greenish gray (5G 3/2); putwinzed by drilling process.     (132-136 5 ft) Sedimentary Rock; dark yellowish brown (10YR 3/6): 132     (132-0 132     (132-0 132     (132-0 132     (132-136 5 ft) Sedimentary Rock; dark yellowish brown (10YR 3/6): 132     (132-0 132	_125	13:00		Metadiorite		$\sim$				
127     128     FW-02A-SS- 127-132     (127-130 ft) Sedimentary Rock, dark yellowish brown (10YR 3/6): putwinzed by afiling process; potentially weathered based on 425/002     (127-130 ft) Sedimentary Rock, dark yellowish brown (10YR 3/6): putwinzed by afiling process; potentially weathered based on 425/002     (127-130 ft) Sedimentary Rock, dark yellowish brown (10YR 3/6): 132     (127-130 ft) Sedimentary Rock, dark yellowish brown (10YR 3/6): 132     (127-130 ft) Sedimentary Rock, dark yellowish brown (10YR 3/6): 132     (127-130 ft) Sedimentary Rock, dark yellowish brown (10YR 3/6): 132     (130-132 ft) Metamorphic Rock; very dark greenish gray (5G 3/2); putwinzed by drilling process.     (132-136 5 ft) Sedimentary Rock; dark yellowish brown (10YR 3/6): 132     (132-0 132     (132-0 132     (132-0 132     (132-136 5 ft) Sedimentary Rock; dark yellowish brown (10YR 3/6): 132     (132-0 132	_					$\sim$				
128       FW-02A-SS- 127-1302       Topock- Weathered 128       Topock- Weathered 130       Topock- Weathered 130       Topock- Weathered 130       Topock- Weathered 130       Topock- Weathered 130       Topock- Weathered 130       Topock- Weathered Bedrock- 132       Topock- Weathered Bedrock- 132       Topock- Weathered Bedrock- Weathered Bedrock- Weathered Sectork- N/A       Topock- Weathered Bedrock- Weathered Bedrock- Weathered Sectork- N/A       Topock- Weathered Bedrock- Weathered Bedrock- Weathered Sectork- N/A       Topock- Weathered Bedrock- Weathered Sectork- N/A       Topock- Weathered Bedrock- Weathered Sectork- N/A       Topock- Weathered Bedrock- Weathered Sectork- N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork- N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork- N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork- N/A       N/A       N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork-	_126									
128       FW-02A-SS- 127-1302       Topock- Weathered 128       Topock- Weathered 130       Topock- Weathered 130       Topock- Weathered 130       Topock- Weathered 130       Topock- Weathered 130       Topock- Weathered 130       Topock- Weathered Bedrock- 132       Topock- Weathered Bedrock- 132       Topock- Weathered Bedrock- Weathered Bedrock- Weathered Sectork- N/A       Topock- Weathered Bedrock- Weathered Bedrock- Weathered Sectork- N/A       Topock- Weathered Bedrock- Weathered Bedrock- Weathered Sectork- N/A       Topock- Weathered Bedrock- Weathered Sectork- N/A       Topock- Weathered Bedrock- Weathered Sectork- N/A       Topock- Weathered Bedrock- Weathered Sectork- N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork- N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork- N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork- N/A       N/A       N/A       Topock- Weathered Sectork- N/A       N/A       Topock- Weathered Sectork-	_									
128.     FW-02A-SS- 132-130     Topock - vasation     Topock - vasation     Topock - vasation     N/A     N/A <td< td=""><td>_127</td><td></td><td></td><td></td><td></td><td>× × × (127-</td><td>130 ft) Sedimentary Rock: dark vellowish</td><td>brown (10YR 3/6) :</td><td>(127.0 -</td><td>(127.0 -</td></td<>	_127					× × × (127-	130 ft) Sedimentary Rock: dark vellowish	brown (10YR 3/6) :	(127.0 -	(127.0 -
128       FW-02A-SS- 127-130       Topook - Weathered Bedrock - (0.025 ppb)       Topook - Weathered Bedrock - Conglomerate       N/A       X X X X X X X X X Conglomerate       Image: Conglomerate Conglomerate       Image: Conglomerate Conglomerate       Image: Conglomerate Conglomerate       Image: Conglomerate Conglomerate       Image: Conglomerate Conglomerate       Image: Conglomerate Conglomerate       Image: Conglomerate	· _					x x x x pulve	rized by drilling process; potentially weath		`132.0')	132.0') No drilling flui
129       4/25/202         130       5         130       5         130       130         5       130         131       4/25/202         132       130         131       4/25/202         132       130         131       4/25/202         132       130         132       130         133       130         132       1310         133       1310         132       1310         133       1310         134       5         135       132.136.5         136       132.136.5         137.01       137.01         138       5         139       131.5         131       130.5         132       131.5         133       130.5         134       5         135       132.136.5         136       132.136.5         137       137.01         138       5         139       132.02         130       132.02         131       132.02         132.02							g observations.		Rough unling	used
129       13.05       FW-02A-SS- 130-132       13.05       FW-02A-SS- 130-132       Conglomerate (*0.032 ppb) 4/232/022       **** ****       (130-132 ft) Metamorphic Rock; very dark greenish gray (5G 3/2); pulverized by drilling process.         131       FW-02A-SS- 132-133.5       Topock - Metadiorite       N/A       (132-136.5 ft) Sedimentary Rock; dark yellowish brown (10VR 3/6); ****       (132.0 - 137.0)       (132.0 - 137.0)         134       FW-02A-SS- 132-136.5       Topock - Weathered Bedrock - Conglomerate       Topock - Weathered Bedrock - Conglomerate       N/A       **** ****       (132-136.5 ft) Sedimentary Rock; dark yellowish brown (10VR 3/6); ****       (132.0 - 137.0)       (132.0 - 137.0)         136       5       FW-02A-SS- 132.136.5       Topock - Weathered Bedrock - Conglomerate       N/A       **** ****       (136.5-137 ft) Metamorphic Rock; dark grayish olive (10Y 4/2); pulverized by drilling process; potentially weathered based on drilling observations.       (137.12 ft) Metamorphic Rock; dark grayish olive (10Y 4/2); pulverized by drilling process; potentially weathered based on drilling observations.         137       FW-02A- VAS-137.0       Topock - Metadiorite       N/A       (137.12 ft) Metamorphic Rock; dark grayish olive (10Y 4/2); pulverized by drilling process; potentially weathered based on drilling observations.       (137.142 ft) Metamorphic Rock; dark grayish olive (10Y 4/2); pulverized by drilling process; potentially weathered based on drilling observations.       (137.142 ft) Metamorphic Rock; dark grayish olive (10Y 4/2); pulverized by					N/A	$\times \times \times$				
130       5       (c0.025 ppb) (4/32/020 9390       X × X × VX × X Valuerized by drilling process.         131       FW-02A-SS- 130-132       Topock - Weathered 132       N/A       Valuerized by drilling process.         132       FW-02A-SS- 132-136.5       Topock - Weathered 132.0       N/A       Valuerized by drilling process.         134       FW-02A-SS- 132-136.5       Topock - Weathered 136.5-142       Topock - Weathered 136.5-142       N/A       Valuerized by drilling process.         136       FW-02A-SS- 132-136.5       Topock - Weathered 136.5-142       Topock - Weathered 136.5-142       N/A       Valuerized by drilling process.         137       FW-02A-SS- 132-136.5       Topock - Weathered Bedrock - Congiomerate       N/A       X × X × X × X ×	_129		VAS-127-		U	X X X				
130       4/23/2022       09:50       Topock - Weathered Bedrock - Metadorite       (130-132 ft) Metamorphic Rock; very dark greenish gray (5G 3/2); pulverized by drilling process.         131       132       1310       132-136.5 ft) Sedimentary Rock; dark yellowish brown (10YR 3/6);       (132-0.137.0)       (132-0.137.0)         133       134       5       FW-02A-SS-132-135.5       Topock - Weathered Bedrock - Conglomerate       N/A       X × X × X × X × X × X × X × X × X × X ×	- 5					$  \times \times \times  $				
131       FW-02A-SS- 132-131       Topock - Metadiorite       N/A       pulverized by drilling process.       Topock - Metadiorite       N/A         132       133       132       (132-136.5 ft) Sedimentary Rock; dark yellowish brown (10YR 3/6); 137.0)       (132.0 - 137.0)       (132.0 - 137.0)         133       5       FW-02A-SS- 132-136.5       Topock - Weathered Bedrock - Conglomerate       N/A       X × X × × ×       (132-136.5 ft) Sedimentary Rock; dark yellowish brown (10YR 3/6); X × × ×       (132.0 - 137.0)       (132.0 - 137.0)         134       5       FW-02A-SS- 132.136.5       Topock - Weathered Bedrock - Conglomerate       N/A       X × × X × × ×       (136.5-137 ft) Metamorphic Rock; dark grayish olive (10Y 4/2); pulverized by drilling process; potentially weathered based on drilling observations.       (137.142 ft) Metamorphic Rock; dark grayish olive (10Y 4/2); pulverized by drilling process; potentially weathered based on drilling observations.         136       5       FW-02A- 132.0       FW-02A- 142       N/A       (136.5-137 ft) Metamorphic Rock; dark grayish olive (10Y 4/2); pulverized by drilling process; potentially weathered based on drilling observations.       (137.142 ft) Metamorphic Rock; dark grayish olive (10Y 4/2); pulverized by drilling process; potentially weathered based on drilling observations.       (137.142 ft) Metamorphic Rock; dark grayish olive (10Y 4/2); pulverized by drilling process; potentially weathered based on drilling observations.       (137.142 ft) Metamorphic Rock; dark grayish olive (10Y 4/2); pulverized by drilling process; p	_130		4/23/2022			XXX	132 ft) Metamorphic Rock: very dark gree	enish grav (5G 3/2) <sup>.</sup>		
4/25/2022       13:10       Bedrock - Metadiorite       N/A         132       13:10       Metadiorite       MA         132       -       -       -       -       -         133       -       -       -       -       -       -         134       -       -       -       -       -       -       -         134       -       5       132-136.5       -			00.00							
13:10       Metadiorite         132       13:10       Metadiorite         132       -       -         133       -       -         133       -       -         134       -       5         135       -       -         136       -       -         137       -       -         138       -       -         138       -       -         138       -       -         139       -       -         139       -       -         139       -       -         140       -       -         N/A       -       -         -       -       -       -         -       -       -       -         -       -       -       -         -       -       -       -       -         -       -       -       -       -         -       -       -       -       -       -         -       -       -       -       -       -         -       -       -       -       - </td <td></td> <td></td> <td></td> <td></td> <td>N/A</td> <td></td> <td></td> <td></td> <td></td> <td></td>					N/A					
<ul> <li>133.</li> <li>134.</li> <li>134.</li> <li>134.</li> <li>134.</li> <li>134.</li> <li>135.</li> <li>135.</li> <li>136.</li> <li>136.</li> <li>137.</li> <li>136.</li> <li>137.</li> <li>138.</li> <li>139.</li> <li>1320</li> <li>FW-02A-SS- 132.02</li> <li>1320</li> <li>FW-02A- 142</li> <li>142</li> <li>(132.02.4)</li> <li>FW-02A- 142</li> <li>(132.02.4)</li> <li>(132.02.4)</li></ul>	· _									
133 134 134 135 135 135 136 137 137 137 137 137 137 137 137	_132		•			× × × (132	136 5 ft) Sedimentary Rock: dark vellowis	sh brown (10YR 3/6).	(132.0 -	(132.0 -
List and the second						$\begin{vmatrix} \times & \times & \times \\ \times & \times & \times \end{vmatrix}$ fragm		sir brown (1011( 3/0),	137.0')	137.0')
134       5       FW-02A-SS- 132-136.5       Topock - Weathered Bedrock - Conglomerate       N/A       X × X × X × X ×	_133					$  \times \times \times  $			Rough arilling	No drilling flui used
134       5       FW-02A-SS- 4/25/2022       Topock - Weathered Bedrock - Conglomerate       N/A       X × X × X × X ×						$  \times \times \times  $				
5       4/25/2022         135       13:15         -136       -         -137       -         -137       -         -138       -         -139       -         -138       -         -139       -         -139       -         -140       -						$  \times \times \times  $				
135       -		4/25/2022								
-136	_135	10.10		Congionierad		$  \mathbf{X} \mathbf{X} \mathbf{X}  $				
130       -										
137       Topock - Weathered         137       -         138       -         138       5         136.5-142       +         4/25/2022       13:20         139       -         130       -         140       -         Abbreviations:       USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Rec	_136_					$  \times \times \times  $				
137	-			Topock -	N1/A		5-137 ft) Metamorphic Rock: dark grovish	olive (10¥ 4/2).		
138       5       FW-02A-SS- 136.5-142       FW-02A-SS- 136.5-142       FW-02A- VAS-137- 142       FW-02A- VAS-137- 142       FW-02A- VAS-137- 142       N/A       Image: Constraint of the temperature of temperatur	_137			Weathered	IN/A	pulve	rized by drilling process; potentially weath	hered based on		
138      136.5-142       FW-02A-SS- 136.5-142       Topock - VAS-137- 142       Topock - Weathered Bedrock - Metadiorite       Topock - Weathered Bedrock - Metadiorite       N/A        139	.				1			live (10Y 4/2):		
5       4/25/2022 13:20       142 (<0.025 ppb) 4/23/2022 15:44       Weathered Bedrock - Metadiorite       N/A       Metadiorite         140       N/A       Metadiorite       N/A       Metadiorite       N/A         140       N/A       Metadiorite       N/A       Metadiorite       N/A         Abbreviations:       USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Rec				Topock -		pulve	rized by drilling process; potentially weath			
139		4/25/2022	142	Weathered	N/A		y observations.			
140       140         Abbreviations:       USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Rec	_139	13.20	4/23/2022							
Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Rec			15:44							
		110.00								
							* *			
I/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks represent depth to wat										
gs.) first encountered from logging and depth to water measured during the first VAS interval, respectively. Apparent partial recoveries can b esult of potential compaction of sediments in the core bag.	÷ ,			-			aring the first VAS interval, respe	cuvely. Apparent p	artial recoverie	s can be th

	<u>\R</u>	CAE	DIS		Bo	oring	_og		She	et: 8 of	10
Date Star			1/2022			e Elevati		Borin	g No.:	FW-02A	Pilot
Date Cor	•		6/2022			ng (NAD		_ L	-		
Drilling C			cade			) (NAD8		_ Client:	PG&E		
Drilling M			c Drilling		Total D	•	<u>182 ft bgs</u>	Project:		<u>N Remedy P</u>	
Drill Rig 1			<u>t Longyear dril</u>			ole Diam		_ Location:	<u>PG&amp;E 1</u>	Topock, Need	lles Californ
Driller Na			e Vasquez				ater: <u>93.0 ft bgs</u>	-		0400055	
Drilling A	ISSI:		<u>n Whitman / Jo</u>			-		_ Project N	umber:	30126255	
_ogger:			d Cornell		-	ng Interv rted to W		-			
Editor:		<u>5ea</u>	n McGrane	-							
Depth (ft) Recoverv	(ft)	Sieve Sample II	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
_ _141	5			Topock - Weathered Bedrock -	N/A		87-142 ft) Metamorphic Rock; dark grayish verized by drilling process; potentially wea ling observations.				
				Metadiorite							
_142	-+						2-152 ft) Metamorphic Rock; olive gray (5)	(4/2) with dar	<u>,</u>		
_							lowish brown (10YR 3/4); pulverized by dril rentially weathered based on drilling observ	ling process;	`		
_143							contraity weathered based off utiling observ	au0115.			
_144		W-02A-SS	-								
_145		4/25/2022									
_145		13:25									
_146											
_140											
_147	10			Topock - Weathered	N/A						
				Bedrock - Metadiorite	IN/A						
_148											
_149			- FW-02A- VAS-147-		$\mathbf{O}$					(1.10.0	(1.10.0
_	'	147-152 4/25/2022	152 (<0.025 ppb)							(149.0 - 152.0')	(149.0 - 152.0')
150		13:30	4/24/2022							Soft drilling	No drilling flu used
_			12:20								
_151				•							
_152							i2-162 ft) Metamorphic Rock; olive gray (5)	(4/2) with darl	<u>,</u>	(152.0 -	(152.0 -
_							lowish olive (10YR 3/4); pulverized by drilli athered based on drilling observations.	ng process; po	tentially	162.0') Soft drilling	162.0') No drilling flu
_153							action of based on animing observations.				used
_154		W-02A-SS 152-157	-								
		4/25/2022 13:35									
_100_		13.33									
_156	10			Topock - Weathered	N1/A						
	10			Bedrock - Metadiorite	N/A						
_157				motadionte							
	Γ										
_158		-W-02A-SS	FW-02A-								
		157-162	162								
_159		4/25/2022 13:40	(<0.025 ppb) 4/25/2022								
			10:25								
160						$\sim$					
	tions				-		, bgs = below ground surface, am				
	1 A	- 11 - 1 - 1 - 1			1						
I/A = No			-				Notes: Solid blue and hollow blue during the first VAS interval, respe				

9	AR	<u> 2</u> 22			BC	pring	Log	;	Sheet: 9 of	10
	started		31/2022		Surface			- Borina Na	o.: <u>FW-02A</u>	Pilot
		eted: <u>04/</u>			Northin			_		
	Co.:		scade		Easting			_ Client: <u>PG&amp;</u>		
-	Meth		nic Drilling		Total D	•	<u>182 ft bgs</u>	•	GW Remedy P	
	g Туре		art Longyear dr		Boreho			_ Location: <u>PG&amp;</u>	E Topock, Need	lles Californ
	Name:		ve Vasquez		•		/ater: <u>93.0 ft bgs</u>			
•	Asst:		<u>in Whitman / Jo</u>		-	-		_ Project Numbe	r: <u>30126255</u>	
ogge ditor:			<u>vid Cornell</u> an McGrane		Sampli Conver	-		_		
		<u></u>								
Depth (ft)	Recovery (ft)	Sieve Sample		Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
				Topock - Weathered			152-162 ft) Metamorphic Rock; olive gray (5 ellowish olive (10YR 3/4); pulverized by drilli veathered based on drilling observations.	Y 4/2) with dark ing process; potentiall	y	
_101_ -	10			Bedrock - Metadiorite	N/A	$\left  \left  \right  \right $		2		
162							162-172 ft) Sedimentary Rock; dark yellowis	h brown (10YR 3/4);	_	
						$\begin{vmatrix} \times & \times & \times \\ \times & \times & \times \\ \times & \times & \times \\ \times & \times &$	veathered.			
_						× × × × × × × × ×				
_164						× × × × × × × × ×	0.			
165_						× × × × × × × × × × × ×				
166										
				Topock - Weathered		× × × × × × × × × × × × × × × × × × ×				
	10			Bedrock - Conglomerat	IN/A	× × × × × ×	167-169 ft) Metadiorite fragments pulverized	by drilling process.		
168_				- 5		× × × ×				
_						× × × × × × × × ×				
169			FW-02A- VAS-167-		$\mathbf{O}$	$\times \times \times$ $\times \times \times$				
_			172 (<0.13 ppb)			$\begin{array}{c} \times \ \times \ \times \\ \times \ \times \ \times \\ \times \ \times \ \times \end{array}$				
170			4/25/2022			$  \times \times \times \\ \times \times \times$				
-		No Sieve				$\begin{array}{c} \times \times \times \\ \times \times \end{array}$				
171_		Samples		•		$\begin{array}{c} \times \times \times \\ \times \times \\ \times \times \end{array}$				
-		Collecter	'			× × × × × × × × ×				
172_						× × × × × × × × ×	172-177 ft) Sedimentary Rock; brown (10YR	4/3); weathered.	(172.0 -	(172.0 -
						$  \times \times \times \\ \times \times \times$		-	177.5') Hard drilling	177.5') No drilling flu
.173						$  \times \times \times \\ \times \times \times$				used
174						$\begin{array}{c} \times & \times & \times \\ \times & \times & \times \\ \times & \times & \times \end{array}$				
174				Topock - Weathered						
				Bedrock - Conglomerat	N/A	× × × × × × × × ×				
				Congiomerat	.0					
_176_	10					$  \times \times \times \\ \times \times \times$				
٧	10					× × × × × × × × ×				
_177_										
							177-181 ft) Metamorphic Rock; olive gray (5 Irilling process; potentially weathered based			
178_			FW-02A- VAS-177-	Topock -			bservations.	5	(177.5 - 180.5')	(177.5 - 180.5')
_			182	Weathered	N/A				Soft drilling	No drilling flu used
179_			(34 ppb) 4/26/2022	Bedrock - Metadiorite		$\sim$				
_			10:55							
180						$\sim$		· · ·		
					-		et, bgs = below ground surface, an			
		-	÷				, Notes: Solid blue and hollow blue			,
ac ) f		Journere	a nom logging a	ուս սեհլլյ լՕ	water	neasu	d during the first VAS interval, resp	ecuvely. Apparent	parual recoverie	s can be th

Date Started: Date Completed:	ADIS		Bo	oring Log	g		She	et: 10 of	10
Jata Completed	03/31/2022			e Elevation:	554.11 ft amsl	Borin	q No.:	FW-02A	Pilot
-				ng (NAD83):	2100450.05	_			
Drilling Co.: Drilling Method:	<u>Cascade</u> Sonic Drilling		Easting Total D	g (NAD83): Jenth:	<u>7614666.44</u> <u>182 ft bgs</u>	_ Client: _ Project:	PG&E Final G\	N Remedy P	1260 24
)rill Rig Type:	Boart Longyear d			ble Diameter:	<u>6-7 inches</u>	-		opock, Need	
Driller Name:	Steve Vasquez			to First Water:					
Drilling Asst:	<u>John Whitman / </u>		-	-	4 inch x 10 ft. Core Barrel	_ Project N	umber: 🤆	30126255	
_ogger: 	David Cornell			ng Interval:	Continuous	-			
Editor:	Sean McGrane	1	Convei	ted to Well:	🗌 Yes 🔀 No				
	Sieve Groundwa ample ID Sample II		USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
	o Sieve Amples (24 pt)		N/A	drilling   observa		on drilling		(180.5 - 182.0')	(180.5 - 182.0')
	(34 ppb)           bllected         4/26/2022           10:55	Topock - Weathered Bedrock - Çonglomerat	1.1/1		2 ft) Sedimentary Rock; brown (10YR	4/3); weather	ed.	Hard drilling	No drilling flu used
					Boring at 182 ft bgs.				
-					0,				
_185					2 0				
186									
_									
_188									
_189_			0						
				•					
					•				
101									
- _191 -									
 _192									
_ 192_ 193_ 194_ _									
  193 194									
_ 192_ 193_ 194_ 195_ _									
_ 192_ 193_ 194_ 195_ 196_ -									
_									
 192 193 194 195 196 197									
_192_ _193_ _193_ _194_ _195_ _196_ _196_ _197_ _198_ _									
192_ 193_ 193_ 194_ 195_ 195_ 196_ 197_ 198_ 199_ 200 bbreviations: U			-	-	s = below ground surface, am				

9	<u> </u>	CAD	IS		Bc	oring	_og	S	heet: 1 of	8
Date S			/2022			e Elevatio		- Boring No	.: FW-02B	Pilot
	omple		/2022			ig (NAD8		_		
Drilling		Casc				) (NAD83		Client: <u>PG&amp;E</u>		
	Metho		: Drilling		Total D	•	<u>142 ft bgs</u>	•	<u>GW Remedy P</u>	
	g Type Name:		<u>Longyear drill</u> Arnold			ble Diame	er: <u>4-8 inches</u> ater: <u>102.0 ft bgs</u>	Location: <u>PG&amp;E</u>	<u>- Topock, Need</u>	lies Calliom
Drilling			S / DH		•	ng Metho		 Project Number	. 20126255	
_oggei			derson / L. Mil			ng Interva			. <u>30120233</u>	
Editor:			McGrane			ted to We				
	~									
Depth (ft)	Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
 _ 1 - 2				Fluvial Deposits	sw	, , , , , , , , , , , , , , , , , , ,	2 ft) Well graded sand with gravel (SW); ry fine to very coarse grained, subangular anules, subangular; trace small to very lar bangular; poorly sorted; dry; NOTE: samp -knifing activities.	to subround; trace ge pebbles,	(0.0 - 5.0') Air-knifed for utility clearance sediments not logged.	(0.0 - 5.0') No drilling flu used
3 4 5 6 7	2				NR		8 ft) No Recovery			
- 8	2.5	No Sieve Samples Collected	No Groundwater Samples Collected	Fluvial Deposits	SW	Contraction of the second seco	10.5 ft) Well graded sand with gravel (SV y fine to very coarse grained, subangular very large pebbles, subangular; trace silt; bangular; trace clay; poorly sorted; dry.	to subround; little small	(8.0 - 17.0') Soft drilling, core sample lost down hole, core barrel is pushing loose sand into the formation instead of the core barrel.	(8.0 - 17.0') No drilling flu used
- _15	4.5			Fluvial Deposits	sw	to	7-28.5 ft) Well graded sand with gravel (S y fine to very coarse grained, subangular very large pebbles, subangular; trace silt; bangular; trace clay; poorly sorted; dry. 7.5-19.5 ft) Increase in the percentage of d diments.	to subround; little small trace granules,	(17.0 - 22.0') Core barrel snagged on the drill casing and the drill casing advanced approximately 0.5-1 ft. Potental void	(17.0 - 22.0' No drilling flu used
	/iations	: USCS =	Unified Soil C	lassification	n Svster	n, ft = fee	t, bgs = below ground surface, ar	nsl = above mean s		No Recove
							Notes: Solid blue and hollow blue			
		-					during the first VAS interval, resp			
J-1/1			action of sedim	-						

Drilling Co.: Drilling Method: Drill Rig Type: Driller Name: Drilling Asst: ogger: Editor:	08/20/2022         09/01/2022         Cascade         Sonic Drilling         Boart Longyear dri         Matt Arnold         LA / IS / DH         J. Anderson / L. M         Sean McGrane         Sieve         mple ID         Groundwate         Sample ID	ll head	Northin Easting Total D Boreho Depth t Samplin Samplin	ble Diam to First \ ng Meth ng Inter ted to V	83):       2100637.96         33):       7614544.74         142 ft bgs         neter:       4-8 inches         Water:       102.0 ft bgs         nod:       4 inch x 10 ft. Core Barrel         val:       Continuous         Vell:       X Yes         No         Soil Description	Location: <u>PG&amp;E</u>	W Remedy Pr Topock, Need	nase 2A
Drilling Co.: Drilling Method: Drill Rig Type: Driller Name: Driller Name: Drilling Asst: cogger: Editor: -21 4.5 -22 4.5	Cascade Sonic Drilling Boart Longyear dri Matt Arnold LA / IS / DH J. Anderson / L. M Sean McGrane	ll head	Easting Total D Boreho Depth t Samplin Conver	(NAD8) epth: ble Diam to First \ ng Meth ng Inter ted to V	3):       7614544.74         142 ft bgs         veter:       4-8 inches         Nater:       102.0 ft bgs         vod:       4 inch x 10 ft. Core Barrel         val:       Continuous         Vell:       X Yes         No         Soil Description	Client: <u>PG&amp;E</u> Project: <u>Final G</u> Location: <u>PG&amp;E</u>	W Remedy Ph Topock, Need 30126255	nase 2A les California
Drilling Method: Drill Rig Type: Driller Name: Drilling Asst: Drilling Asst: Drilling Asst: $\frac{1}{2}$	Sonic Drilling Boart Longyear dri Matt Arnold LA / IS / DH J. Anderson / L. M Sean McGrane	ll head	Total D Boreho Depth t Samplin Samplin Conver	epth: le Diam to First \ ng Meth ng Inten ted to V	142 ft bgs         eter:       4-8 inches         Nater:       102.0 ft bgs         nod:       4 inch x 10 ft. Core Barrel         val:       Continuous         Vell:       X Yes         No       Soil Description         (17-28.5 ft) Well graded sand with gravel (SW)	Project: <u>Final G</u> Location: <u>PG&amp;E</u>	Topock, Need	les Californi
Drill Rig Type: Driller Name: Drilling Asst: ogger: Editor: -21 4.5 -22 4.5	Boart Longyear dri Matt Arnold LA / IS / DH J. Anderson / L. M Sean McGrane	ll head	Boreho Depth t Samplin Samplin Conver	ble Diam to First \ ng Meth ng Inter ted to V	eter: <u>4-8 inches</u> Water: <u>102.0 ft bgs</u> nod: <u>4 inch x 10 ft. Core Barrel</u> val: <u>Continuous</u> Vell: X Yes No Soil Description (17-28.5 ft) Well graded sand with gravel (SW)	Location: <u>PG&amp;E</u>	Topock, Need	les Californ
Driller Name: Drilling Asst: ogger: Editor: $f_{a}^{(+)}$ $g_{a}^{(+)}$ $f_{a}^{(+)}$ $g_{a}^{(+)}$ $f_{a}^{(+)}$ $g_{a}^{(+)}$ $f_{a}^{(+)}$ $g_{a}^{(+)}$ $f_{a}^{(+)}$ $g_{a}^{(+)}$ $f_{a}^{(+)}$ $g_{a}^{(+)}$ $f_{a}^{(+)}$ $g_{a}^{(+)}$ $f_{a}^{(+)}$ $g_{a}^{(+)}$ $f_{a}^{(+)}$ $g_{a}^{(+)}$ $f_{a}^{(+)}$ $g_{a}^{(+)}$ $f_{a}^{(+)}$ $g_{a}^{(+)}$ $f_{a}^{(+)}$ $f_{a}^{(+)}$ $g_{a}^{(+)}$ $f_{a}^{(+)}$ f	Matt Arnold LA / IS / DH J. Anderson / L. M Sean McGrane Sieve Groundwate	ilando	Depth t Samplin Samplin Conver	to First \ ng Meth ng Inter ted to V	Water:         102.0 ft bgs           nod:         4 inch x 10 ft. Core Barrel           val:         Continuous           Vell:         X Yes           No           Soil Description           (17-28.5 ft) Well graded sand with gravel (SW)		30126255	
Drilling Asst: .ogger: .ditor: $f_{a}^{f}(\underline{t})$ $f_{a}^{f}(\underline{t})$ $f_{a}^{f}($	LA / IS / DH J. Anderson / L. M Sean McGrane Sieve Groundwate	ilando	Samplii Samplii Conver	ng Meth ng Inter ted to V	iod: <u>4 inch x 10 ft. Core Barrel</u> val: <u>Continuous</u> Vell: ⊠ Yes ☐ No Soil Description (17-28.5 ft) Well graded sand with gravel (SW	Project Number:		Drilling Fluid
ogger: iditor: $\begin{array}{c} \underbrace{f_{a}}_{b} \underbrace{f}_{b} \\ \underbrace{f_{a}}_{b} \underbrace{f}_{b} \\ \underbrace{f_{a}}_{b} \underbrace{f}_{b} \\ \underbrace{f_{a}}_{b} \underbrace{f}_{b} \\ \underbrace{f}_{b} \underbrace{f}_{b} \underbrace{f}_{b} \\ \underbrace{f}_{b} \underbrace{f}_{b}$	J. Anderson / L. M Sean McGrane Sieve Groundwate	ilando	Samplii Conver	ng Inter ted to V SSSO SSO SSO SSO SSO SSO SSO SSO SSO S	val: <u>Continuous</u> Vell: X Yes No Soil Description	_ Project Number: -		Drilling Fluid
$\begin{array}{c c} \hline \text{iditor:} \\ \hline \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	Sean McGrane		Conver	ted to V SCS Class Clas	Vell: Xes No Soil Description (17-28.5 ft) Well graded sand with gravel (SW		Drilling Notes	Drilling Fluid
ftdeg 214.5 22	Sieve Groundwate			Class	Soil Description		Drilling Notes	Drilling Fluid
_214.5 	-	Geologic	USCS Code		(17-28.5 ft) Well graded sand with gravel (SW		Drilling Notes	Drilling Fluid
_24 _25 _26 _277 7		Fluvial Deposits	SW		very fine to very coarse grained, subangular to to very large pebbles, subangular; trace silt; tra subangular; trace clay; poorly sorted; dry. (24 ft) Increase in the percentage of coarser gr granules with depth. Lower percentage of silt p depth.	subround; little small ace granules,	forming or extremely soft sand.	
_ <sup>30</sup> San	Sieve nples ected No Groundwater Samples Collected	Fluvial Deposits	sw		(28.5-31 ft) Well graded sand with gravel (SW 7(2); very fine to very coarse grained, subangu small to very large pebbles, subangular to sub granules, subangular; trace silt; dry; pebbles c metadiorite; granule and pebble size decrease percentage of sand decreases with depth; friat cementation. (31-37 ft) Well graded sand with gravel (SW);	ar to subround; little round; trace omposed of s with depth; ole caliche light gray (10YR 7/2);		
		Alluvium Deposits	SW	0.0.0.0.0.0	very fine to coarse grained, subangular to subr very large pebbles, subangular; trace granules silt; poorly sorted; dry; larger pebbles are com	, subangular; trace	(32.0 - 107.0') Rough drilling, potential boulder at approximately 32 ft bgs.	(32.0 - 107.0 No drilling flu used
_37 _38 _39 _40		Alluvium Deposits	SW-SM		(37-39.5 ft) Well graded sand with silt (SW-SM 7/2); very fine to coarse grained, subangular to trace small pebbles, subround; trace granules, strong HCI reaction; friable caliche cementatio	subround; trace silt; subangular; dry;		
					eet, bgs = below ground surface, ams			
	<b>v</b>				n, Notes: Solid blue and hollow blue v		• •	
gs.) first encount	tered from logging a	and depth to	water r	measure	ed during the first VAS interval, respe	ctively. Apparent pa	artial recoverie	s can be th

ARC	AD	S		Bc	pring	l Log		She	et: 3 of	8
ate Started:	08/20/			Surface			Boring	No.:	FW-02B	Pilot
ate Completed				Northin			_			
rilling Co.:	<u>Casca</u>			Easting			-	PG&E		
rilling Method:		Drilling		Total D	-	<u>142 ft bgs</u>	-		V Remedy P	
rill Rig Type: riller Name:	<u>Boart</u> Matt A	Longyear drill		Boreho		neter: <u>4-8 inches</u> Water: <u>102.0 ft bgs</u>	_ Location:	PG&EI	opock, Need	ales Californ
rilling Asst:	LA / IS			Sampli			- Project Ni	Imher: ?	30126255	
ogger:		lerson / L. Mila		Sampli	•				0120200	
ditor:		McGrane		Conver	0		_			
Depth (ft) (ft) (ft) (ft) S	Sieve ample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluic
.41 .42 .437.5 .44 .45 .46			Alluvium Deposits	sw		(39.5-46.5 ft) Well graded sand with gravel (S gray (10YR 6/2), and light gray (10YR 7/1); ve grained, subangular to subround; little granule small pebbles, subangular; trace silt; poorly so reaction; strong caliche cementation.	ry fine to very ca is, subangular; orted; dry; stron	parse trace g HCI		
_47			Alluvium Deposits	SW-SM		(46.5-47.5 ft) Well graded sand with silt (SW- 7/1); fine to very coarse grained, subangular to trace granules, subangular to subround; trace subangular; poorly sorted; dry; moderate HCI	o súbround; littl small pebbles,	è silt;		
_48			Alluvium Deposits	SW-SM		caliche cementation. (47.5-49 ft) Well graded sand with silt and gra orange yellow (10YR 8/2), and light gray (10Yl coarse grained, subangular to subround; little pebbles, subangular to subround; little silt; tra	R 7/1); fine to v small to large	oale ery		
_50S	o Sieve amples ollected	No Groundwater Samples Collected	Alluvium Deposits	SW-SM		subangular to subround; poorly sorted; dry; moderate caliche cementation. (49-50.5 ft) Well graded sand with silt and gra orange yellow (10YR 8/2), and light gray (10YI coarse grained, subangular to subround; little	oderate HCl rea vel (SW-SM); R 7/1); fine to v small to large	pale		
_51 			<b>K</b>			pebbles, subangular to subround; trace silt; tra- subangular to subround; trace clay; poorly sor HCI reaction; moderate caliche cementation. (49-50.5 ft) Decrease in silt to approximately 1 the amout moderate caliche cementation. (50.5-57 ft) Well graded sand with gravel (SW 7/2); very fine to coarse grained, subangular to	ted; dry; moder 1% silt, and incr /); light gray (10 5 subround; littl	rease IYR e		
.533 .54 .55			Alluvium Deposits	sw		small to medium pebbles, subangular to subro subangular to subround; trace silt; trace clay; moderate HCI reaction; weak caliche cementa	poorly sorted; c			
.56 .57										
-578 _58			Alluvium Deposits Alluvium	SW		(57-57.5 ft) Well graded sand with gravel (SW 7/2); very fine to coarse grained, subangular to small to medium pebbles, subangular to subro subangular to subround; trace silt; trace clay; moderate HCI reaction; weak caliche cementa	o subround; littl ound; little gran poorly sorted; c	e ules,		
_59 60			Deposits	SW-SM						
						eet, bgs = below ground surface, am				
		<u> </u>		• •		n, Notes: Solid blue and hollow blue				•
						ed during the first VAS interval, respe	ctively. App	arent pa	rtial recoverie	es can be th
sult of potentia								pu		

le Startet : 02/02/2022 Surface Elevation: 551.42.11 amsi le Completed: 09/01/2022 Northing (NAD83): 2100637.96 Imig Method: Sonic Dining Total Depth: 142 ft bgs. Project: Final GW Remedy Phase Project: Calcular GW Remedy	
le Competender 09/01/2022 Northing (NADB3): 2100637.96	lot
ling Method: Sonic DellingTotal Dept:: 142 fbgsProject Number: BackWRemedy Phase IRQ Type: Boart Longyear drillheadBorehole Diameter: 4-8 inchesLocation: PG&E Topock. Needles J Borehole Diameter: 4-8 inchesLocation: PG&E Topock. Needles J Borehole Diameter: 4-8 inchesProject Number: 30126255 Sean McGrane Converted to Well: ∑ YesProject Number: 30126257 Sean Sean McGrane Converted to Well: ∑ YesProject Number: 30126257 Sean Sean McGrane Converted to Well: ∑ YesProject Number: 30126257 Sean Sean McGrane Converted to Well: ∑ YesProject Number: 30126257 Sean Sean McGrane Converted to Well: ∑ YesProject Number: 30126257 Mittane McGrane Converted to Well: ∑ YesProject Number: 301261267 Mittane McGrane Converted to Well: ∑ YesProject Number: 30126257 Mittane McGrane M	
II Rig Type: Boart Longyear drill head Borehole Diameter: 4-8 inches Location: PG&E Topock, Needles ( Matt Amold Depth to First Water: 102.0 ft.bgs J.Anderson /L. Milando Sampling Interval: Continuous Sean McGrane Converted to Well: ⊠ Yes No Sean McGrane Converted to Well: ⊠ Yes Sean McGrane Converted to Well: Sean McGrane Mc	
Matt Armoid       Depits to First Wate:       102.0 ft bgs         Janderson / L. Milando       Sampling Method:       Continuous         ger:       Janderson / L. Milando       Sampling Interval:       Continuous         ger:       Sampling Interval:       Continuous       Ontinuous         ger:       Sample ID       Groundwater       Groundwater       Groundwater       Continuous         ger:       Sample ID       Groundwater	
Ling Asst:       LA/LS/DH       Sampling Method:       4 inch x 10 ft. Core Barrel       Project Number: 30126255         gger:       J.Anderson / L. Milando       Sampling Interval:       Continuous       December 2012         gger:       Sam McGrane       Continuous       December 2012       December 2012         gger:       Sienew Contractor       Sout Description       Drilling Notes       Drilling Notes         gger:       Sienew Contractor       Sout Description       Drilling Notes       Drilling Notes         gger:       Sienew Contractor       Sout Description       Drilling Notes       Drilling Notes         gger:       Sienew Contractor       Sout Description       Drilling Notes       Drilling Notes         gger:       Sout Description       Drilling Notes       Drilling Notes       Drilling Notes         gger:       Sout Description       Drilling Notes       Drilling Notes       Drilling Notes         gger:       Sout Description       Drilling Notes       Drilling Notes       Drilling Notes         gger:       Sout Description       Drilling Notes       Drilling Notes       Drilling Notes         gger:       Sout Description       Drilling Notes       Drilling Notes       Drilling Notes         gger:       Sout Description	Californ
gger:       J. Anderson / L. Miando       Sampling Interval:       Converted to Welt:       ∑ Yes       No         E       Sear.McGrane       Converted to Welt:       ∑ Yes       No         E       Server Sample ID       Groundwater Sample ID       Ditting Notes       Dritting Notes	
No.     Sean McGrane     Converted to Well:     Yes     No       Image: Starphold biology of the	
Bit       Since       Count-what       Bit       Bit       Count-what       Bit       Bit       Count-what       Bit       Bit       Count-what       Bit	
11       1	
1       Alluvium       SW-SM       SW-SM       SW-SM         22       8       Alluvium       SW-SM       SW-SM       SW-SM         33       6       0       SW-SM       SW-SM       SW-SM         44       6       0       100 moduling packed and with gravel (SW) light brownish gravel (GW) light gravel (GW) lig	rilling Flui
13       102_5-b5 t) Well graded sand with grave (SW): light brownish gray         14       105         15       106         166       0         17       106         188       106         199       100         198       100         198       100         198       100         198       100         198       100         198       100         198       100         198       100         199       100         199       100         101       100         102       100         103       100         104       100         105       100         106       100         107       100         108       100         109       1000         100       1000         101       1000         102       1000         103       1000         104       1000         105       1000         106       1000         107       1000         108	
Alluvium       NR         No       Sieve Samples         Collected       NR         Alluvium       SW         Alluvium       SW         Collected       Alluvium         No       Sieve Samples         Collected       Groundwater Scollected         Alluvium       SW         Alluvium       SW         Alluvium       SW         Collected       Groundwater Samples         Collected       Groundwater Scollected         Alluvium       SW         Alluvium       SW         Deposits       SW         Collected       Groundwater Samples         Collected       Groundwater Scollected         Alluvium       SW         Alluvium       SW         Collected       Groundwater Samples         Collected       Groundwater Scollected         Alluvium       SW         Collected       Groundwater Scollected         Alluvium       SW         Collected       Groundwater Collected         Alluvium       SW         Collected       Groundwater Collected         Alluvium       SW         Collected       Grin	
38       No Sieve       No Sieve       SW       Image: Signappic Sign	
No       Sieve Samples Collected       No       Sieve Samples Collected       No         1       -	
7       7         73       Alluvium Deposits         74       SM         75       (74.5-77.5 ft) Well graded sand with gravel (SW); yellowish brown (10YR 5/4); fine to very coarse grained, subangular to subround; trace small to medium pebbles, subangular to subround; trace clay; poorly sorted; dry to moist; moderate HCl reaction; weak caliche cementation.         77	
3	
75	
(// it) Decrease in small to large peoples, increase in sand.	
8       Alluvium Deposits       Alluvium Deposits       SW-SM       Itel site state of the sta	
breviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No F	Recove
A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks represent depth to	
s.) first encountered from logging and depth to water measured during the first VAS interval, respectively. Apparent partial recoveries ca	

2	AR	<u>RCAD</u>	15				l Log		She	et: 5 of	8
	tarted				Surface			Borin	a No.:	FW-02B	Pilot
	omple				Northin			_	-	<u> </u>	
rilling		Casca	ade		Easting	) (NAD	83): <u>7614544.74</u>	_ Client:	PG&E		
rilling	Methe	od: <u>Sonic</u>	Drilling		Total D	epth:	<u>142 ft bgs</u>	_ Project:	Final G\	V Remedy Pl	nase 2A
rill Riq	д Туре	e: <u>Boart</u>	Longyear drill	head	Boreho	le Diar	neter: <u>4-8 inches</u>	_ Location:	<u>PG&amp;E 1</u>	opock, Need	lles Californ
riller <b>i</b>	Name:	Matt A	Arnold		Depth 1	to First	Water: <u>102.0 ft bgs</u>	_			
rilling	Asst:	<u>LA / IS</u>	S / DH		Sampli	ng Met	hod: <u>4 inch x 10 ft. Core Barrel</u>	_ Project N	umber:	30126255	
ogger	r:	<u>J. And</u>	derson / L. Mil	ando	Sampli	ng Inte	rval: <u>Continuous</u>	_			
ditor:		<u>Sean</u>	McGrane		Conver	ted to	Nell: 🛛 Yes 🗌 No				
Depth (ft)	Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
_81 _82 _83				Alluvium Deposits	SW-SM		(77.5-83 ft) Well graded sand with silt and gra yellowish brown (10YR 5/4); very fine to very of subangular to subround; little silt; little small to subangular; trace granules, subangular to sub poorly sorted; dry; moderate HCI reaction; we cementation.	coarse grainec o large pebble pround; trace c	l, S,		
83_	8						(83-92.5 ft) Well graded sand (SW); light gray to very coarse grained, subangular to subrour	d; trace granu			
.84							subangular to subround; trace small to mediu subangular to subround; trace silt; poorly sort reaction; strong caliche cementation; increase	ed; dry; moder			
.85_		No Sieve Samples					finer grained sand and silt with depth.				
		Collected									
86											
87_											
_				Alluvium							
.88			No	Deposits	SW						
			Groundwater Samples								
.89	2.0		Collected								
.90_	3.8										
_											
91		FW-02B-SS-									
		90-92.5 8/25/2022									
92		16:05									
93 _ 94		FW-02B-SS- 92.5-96 8/25/2022					(92.5-99 ft) Well graded sand with silt and gra gray (10YR 7/2); very fine to very coarse grain subround; little granules, angular to subroungul medium pebbles, subangular to subround; littl dry; trace metadiorite pebbles; approximately moderate caliche cementation.	ed, subangula ar; little small e silt; poorly s	to to orted;		
95_	3.9	16:10							¥		
_				Allunium							
96_				Alluvium Deposits	SW-SM						
97_											
		FW-02B-SS- 96-99								(97.0 - 102.0') VAS interval	(97.0 - 102. No drilling fl
98_		8/25/2022 16:15	FW-02B-							had to be resampled due	used
	27		VAS-97-102							to the Cr (VI)	
99_	3.7		(<0.025 ppb) 8/24/2022							inadventently not field	
			11:12	Alluvium						filtered.	
100				Deposits	SW	Ŀĸ.Ŏ.Ÿ					
	/iation	s: USCS =	Unified Soil C	lassification	) Svster	n. ft = 1	eet, bgs = below ground surface, am	sl = above	mean sea	a level. NR = 1	No Recove
							n, Notes: Solid blue and hollow blue				
		•					ed during the first VAS interval, respe				
			ction of sedim	•			→ , ·····	<b>7</b> 1.1	1 -		

9	<u> </u>	<u> 2001 RCAI</u>		Š		Bo	pring	J Log	S	heet: 6 of	8
ate S	tarted		/20/20			Surface			- Boring No	.: <u>FW-02B</u>	Pilot
	omple	eted: <u>09/</u>	/01/20	)22		Northir					
rilling	Co.:	<u>Ca</u>	scade	Э		Easting	) (NAD	83): <u>7614544.74</u>	_ Client: <u>PG&amp;E</u>		
-	Metho		nic Dı	J		Total D	epth:	<u>142 ft bgs</u>	•	GW Remedy P	
	д Туре			ongyear drill	head	Boreho			_ Location: <u>PG&amp;E</u>	Topock, Need	lles Californ
	Name:		att Arn			•		Water: <u>102.0 ft bgs</u>			
Drilling	Asst:		/ IS /			Sampli	•		Project Number	30126255	
oggei	r:			rson / L. Mila	ando	Sampli	-				
ditor:		<u>Se</u>	an Mo	cGrane		Conve	ted to	Well: 🛛 Yes 🗌 No		1	1
Depth (ft)	Recovery (ft)	Sieve Sample		Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Flui
- 101_ - 102_ - 103_ -	3.7	FW-02B-S 99-104 8/25/202 16:20			Alluvium Deposits	SW		(99-104 ft) Well graded sand with gravel (SV 7/2), some brown (10YR 5/3); very fine to ve subangular to subround; little granules, suba trace small to medium pebbles, subangular; sorted; dry to moist; moderate caliche ceme cemented sediment fragments decreased w percentage of coarse grained sand increase (102) Increase in the percentage of metadio	y coarse grained, ingular to subround; trace clay; poorly intation; sizes of th depth; the s with depth.	¥	
104 105 106 107	3.5	FW-02B-5 104-108 8/25/202 16:25	3		Alluvium Deposits	SW		(104-108 ft) Well graded sand with gravel (S very fine to very coarse grained, subangular to large pebbles, subangular to subround; tr subangular to subround; trace silt; trace clay	to subround; little small ace granules,	(107.0 -	(107.0 -
- 108_ 109_ 110_ 111_ - 111_ -	3.6	FW-02B-5 108-112 8/25/202 16:30	2	FW-02B- VAS-107- 112 (<0.025 ppb) 8/24/2022 09:15	Alluvium Deposits	SW-SM		(108-112 ft) Well graded sand with silt and g (10YR 5/3), some light yellowish brown (10) coarse grianed, subangular to subround; littl medium pebbles, subangular to subround; ti subangular to subround; trace clay; poorly s the core has moderate caliche cementation.	R 6/4); very fine to very e silt; trace small to ace granules,	112.0') Bottom of borehole collapsed before sample screen was deployed, tripped back in to clear it out and advance the 6-inch casing to 107 feet bgs. VAS interval had to be resampled due to the Cr	112.0') No drilling flu used
112 113 114 -		FW-02B-5 112-115 8/25/202 16:35	5		Alluvium Deposits	SM		(112-115 ft) Silty sand (SM); brown (10YR 5 grained, subangular to subround; little silt; tr subangular to subround; trace small to med subangular to subround; trace clay; poorly s	ace granules, um pebbles,	(VI) inadventently not field filtered. (112.0 - 122.0') Tight drilling, went back down to clear it out and the	(112.0 - 122.0') No drilling flu used
115 116  117	5	FW-02B-5 115-119.	.5		Alluvium Deposits	SW		(115-119 ft) Well graded sand (SW); light ye 6/4), and brown (10YR 5/3); very fine to coar to subround; trace granules, subangular to s trace small to medium pebbles, subangular poorly sorted; moist; moderate caliche ceme sediments and metadiorite pebbles were me	se grained, subangular ubround; trace silt; to subround; trace clay; entation; cemented	- rig overheated.	
_ 118_ _ 119		8/25/202 16:40		FW-02B- VAS-117- 122 (7.8 ppb) 8/30/2022 11:14	Alluvium	SW-SM				-	
120					Deposits	300-510					
	/iation	s: USCS	6 = Ur	nified Soil Cl	assification	n Systei	n, ft =	eet, bgs = below ground surface, ar	nsl = above mean s	ea level, NR =	No Recove
								n, Notes: Solid blue and hollow blue			
		•		<u> </u>				ed during the first VAS interval, resp			
<u> </u>				on of sedim							

Date Starte Date Comp Drilling Co. Drilling Me Driller Nam Driller Nam Driller Nam Driller Nam Driller Sam Ogger: Editor:	pleted o.: ethod: ype: ne: st: € (£) (¥) (¥) (¥) (¥) (¥) (¥) (¥) (¥	<u>Casca</u> <u>Sonic</u> <u>Boart I</u> <u>Matt A</u> <u>LA / IS</u> J. And	2022 de Drilling _ongyear drill rnold	head [ [ [ [ [ [ [ [	Northin Easting Fotal D Borehc Depth 1 Samplii Samplii Conver	le Diar	D83):       2100637.96         83):       7614544.74         142 ft bgs         neter:       4-8 inches         Water:       102.0 ft bgs         hod:       4 inch x 10 ft. Core Barrel	Boring No.: Client: PG&E Project: Final G Location: PG&E Project Number:	W Remedy Pr Topock, Need	nase 2A
prilling Co. prilling Me prill Rig Ty priller Nam priller Nam prilling Ass ogger: ditor:	£ thod: ype: ne: sst:	Casca Sonic Boart I Matt A LA / IS J. And Sean M Sieve Sample ID	de Drilling ongyear drill rnold / DH erson / L. Mil McGrane Groundwater	<u>head</u> F <u>head</u> F <u>s</u> ando <u>s</u>	Easting Fotal D Borehc Depth 1 Sampli Sampli Conver	(NAD epth: le Diar to First ng Met ng Inte	83): <u>7614544.74</u> <u>142 ft bgs</u> neter: <u>4-8 inches</u> Water: <u>102.0 ft bgs</u> hod: <u>4 inch x 10 ft. Core Barrel</u>	Client: <u>PG&amp;E</u> Project: <u>Final G</u> Location: <u>PG&amp;E</u>	W Remedy Pr Topock, Need	nase 2A
prilling Me prill Rig Ty priller Nam prilling Ass ogger: cditor: tid ditor: tid ditor: tid ditor tid ditor tid ditor tid tid tid tid tid tid tid tid tid tid	ethod: ype: ne: st:	Sonic Boart I Matt A LA / IS J. And Sean M Sieve Sample ID	Drilling _ongyear drill rnold : / DH erson / L. Mil McGrane Groundwater		Fotal D Boreho Depth 1 Samplii Samplii Conver	epth: le Diar to First ng Mel ng Inte	142 ft bgs           neter:         4-8 inches           Water:         102.0 ft bgs           hod:         4 inch x 10 ft. Core Barrel	Project: <u>Final G</u> Location: <u>PG&amp;E</u>	Topock, Need	
Drill Rig Ty Driller Nam Driller Nam Drilling Ass ogger: ditor: $\frac{1}{2}$	ype: ne: st: (#) {	Boart I Matt A LA / IS J. And Sean M Sieve Sample ID	_ongyear drill rnold / DH erson / L. Mil McGrane Groundwater	head [ [] ando(	Boreho Depth 1 Samplii Samplii Conver	ole Diar to First ng Mel ng Inte	neter: <u>4-8 inches</u> Water: <u>102.0 ft bgs</u> hod: <u>4 inch x 10 ft. Core Barrel</u>	Location: <u>PG&amp;E</u>	Topock, Need	
Driller Nam Drilling Ass ogger: Editor:	(€) (€) (€) (€) (€) (€) (€) (€) (€) (€)	<u>Matt A</u> <u>LA / IS</u> <u>J. And</u> <u>Sean N</u> Sieve Sample ID	rnold / DH erson / L. Mil McGrane Groundwater	ando (	Depth 1 Sampli Sampli Conver	to First ng Mel ng Inte	Water:         102.0 ft bgs           hod:         4 inch x 10 ft. Core Barrel		•	les Californ
orilling Ass ogger: Editor: the formation of the formation the formation of the formation the formation of the formation the formation of the formation of the formation the formation of the for	st: (#) (*) (#) (*) (*) (*) (*) (*) (*) (*) (*) (*) (*) (*) (*) (*) (*) (*)	LA / IS J. And Sean M Sieve Sample ID	/ DH erson / L. Mil McGrane Groundwater	ando (	Sampli Sampli Conver	ng Mel ng Inte	hod: 4 inch x 10 ft. Core Barrel	Project Number:	20400055	
ogger: iditor: <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u> <u>traded</u>	€ ; ; ; FW	J. And Sean M Sieve Sample ID	erson / L. Mil McGrane Groundwater	ando s	Sampli Conver	ng Inte		Project Number:		
iditor:	FW	Sieve Sample ID	Groundwater	(	Conver	-			30126255	
L121_5	FW	Sieve Sample ID V-02B-SS-	Groundwater			lea lo				
5 5	FW	Sample ID V-02B-SS-		eologic rmatior	10					
- 0	. 1			ФÖ	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
_122		/25/2022 16:45		Alluvium Deposits	SW-SM		(119-122 ft) Well graded sand with silt (SW-SN 5/3); very fine to coarse grained, subangular to trace clay, trace granules, subround; trace sma pebbles, subround; poorly sorted; moist to wet.	subround; little silt;		
_123	FW	V-02B-SS-		Alluvium Deposits	SM		(122-124.5 ft) Silty sand (SM); dark grayish bro reddish yellow (7.5YR 7/6); very fine to coarse to subround; some silt; trace small to medium subangular; trace clay; poorly sorted; dry to mo	grained, subangular bebbles, angular to	(122.0') Drilling with the 6-inch casing getting tight. Drillers retracked approximately 70 feet of drill casing to ream	(122.0') No drilling flu used
_125_ _126	1: S	22-127.5 9/1/2022 15:30		Alluvium Deposits	SW-SM		(124.5-126.5 ft) Well graded sand with silt (SW brown (2.5Y 4/2), and reddish yellow (7.5YR 7/ coarse grained, subangular to suboround; little s medium pebbles, angular to subangular; trace subangular; trace clay; poorly sorted; dry to mo moderate HCI reaction. (126.5-127.5 ft) Silty sand with gravel (SM); dar	<li>a); very fine to ilt; trace small to granules, angular to ist; blocky structure;</li>	the hole to assist with advancing drill casing.	
_1276.8	8			Alluvium Deposits	SM		(2.5Y 4/2), and reddish yellow (7.5YR 7/6); very grained, subangular to subround; some silt; littl subangular to subround; trace granules, suban trace clay; poorly sorted; dry to moist; blocky st	r fine to very coarse e small pebbles, gular to subround;		
.128 _129 _130 _131	1	V-02B-SS- 27.5-131 9/1/2022 15:35	FW-02B- VAS-127- 132 (36 ppb) 8/31/2022 11:00	Alluvium Deposits	SW		HCI reaction. (127.5-131 ft) Well graded sand with gravel (St brown (2.5Y 4/2), and reddish yellow (7.5YR 7/ coarse grained, subangular to subround; little g to subround; trace small to medium pebbles, si subround; trace silt; poorly sorted; dry to moist; moderate HCI reaction.	V); dark grayish 6); very fine to very ranules, subangular ubangular to		
_132		V-02B-SS- 131-132 9/1/2022 15:40		Alluvium Deposits	SM		(131-132 ft) Silty sand (SM); dark grayish brown reddish yellow (7.5YR 7/6); very fine to very coa subangular to subround; some silt; trace small subangular; trace granules, subangular; trace	arse grained, pebbles,	(122.2	
_133 _134				Weathered Bedrock - Conglomerate	N/A	*****	dry to moist; blocky structure; moderate HCI re (132-135 ft) Sedimentary Rock - Conglomerate fine grained to medium grained; highly weather	action. ; brown (7.5YR 5/4);	(132.0 - 134.5') Poor recovery	(132.0 - 134.5') No drilling flu used
_135 _1367.2	2 5	No Sieve Samples Collected	FW-02B- VAS-135- 137 (Sample results			× × × × × ×	(135-139.5 ft) Sedimentary Rock - Conglomera 5/4); fine grained to medium grained; moderate medium hard; friable; wet, moisture in pockets; drilling process. (135.5-139.5 ft) Moist to dry.	ly weathered:	(135.0 - 142.0') Rough drilling, drill rig started to overheat.	(135.0 - 142.0') No drilling flu used (135.5')
_ 137_ _ 138_ _ 139_			disregraded as water not likely representative of aquifer and is considered not water bearing interval)	Competent Bedrock - Conglomerate	N/A	× × × × × × × × × × × × × × × × × × ×			(135.5') The 6-inch diamter casing stick in the formation, had to vibe to free it and retack to approximately 118 ft bgs.	No drilling flu used
_			9/1/2022 09:22			X X X				
140					N/A	× × × × × × × × ×				
							feet, bgs = below ground surface, ams			
							n, Notes: Solid blue and hollow blue w		• • •	
gs.) first e	encol	untered fro	om logging ar	nd depth to	water ı	neasu	red during the first VAS interval, respec	tively. Apparent pa	artial recoverie	s can be th

9	AR	RCADI	S		Bo	pring	g Log	9			She	eet: 8 of	8
Date St					Surface	e Eleva	ation:	551.67 ft amsl	F	Borin	a No.:	FW-02B	Pilot
Date Co	-					ng (NAI		2100637.96			-	<u></u>	
Drilling		Casca			-	) (NAD	83):	7614544.74			PG&E		
Drilling Drill Rig			<u>_ongyear drill</u>		Fotal D	epth: ble Diar	motor	142 ft bgs 4-8 inches		•		<u>W Remedy P</u> Topock, Need	
Driller N			•••					<u>4-0 inches</u> 102.0 ft bgs		Jalion.	FORE	TOPOCK, NEEC	
Drilling		LA / IS				ng Met		4 inch x 10 ft. Core Barre	el Pro	oject N	umber:	30126255	
Logger			erson / L. Mil		•	ng Inte		Continuous					
Editor:		<u>Sean N</u>	/IcGrane	-	Conver	ted to	Well:	🛛 Yes 🗌 No					1
Depth (ft)	Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Descriptio				Drilling Notes	Drilling Fluid
	7.2	No Sieve Samples Collected		Competent Bedrock - Conglomerate	N/A	*****		42 ft) Sedimentary Rock - Cong e grained to medium grained; sl able; dry to moist; moisture in po	ightly weath	ered; me	dium		
142						$\begin{array}{c} \times \ \times \ \times \\ \times \ \times \ \end{array}$		Boring at 142 ft bgs.					
110													
146													
146  147													
								0					
								0,					
 147  148 													
 _147 						2							
147 148 148 149 						2							
 147  148 						2							
					S	2							
147 148 149 149 150 						3							
147 148 149 149 150 				Ć		2							
147 148 148 149 150 151 152 152 152						2							
147 148 149 149 150 151 151						2							
						2							
147 148 149 149 150 151 151 152 153 153 153						2							
147 148 149 149 150 151 151 152 153 153 153						2							
						2							
						2							
						2							
147 148 148 149 150 150 153 153 153 154 155 155 155						2							
						2							
						2							
	iations	s: USCS = L	Jnified Soil C	lassification	Syster	<b>n</b> , ft = 1	feet, bgs	s = below ground surface	-, amsl = a	above r	nean sea	a level, NR =	No Recovery
147 148 148 148 149 150 151 152 154 154 155 156 157 158 159 159 160 N/A = N	Not Ap	oplicable, GV	/ = groundw	ater, ppb =	parts p	er billic	on, Note	s = below ground surface s: Solid blue and hollow b ng the first VAS interval, r	olue water	r table ı	narks re	epresent dept	h to water (ft

βA	RC/	٩DI	S		Bo	oring	Lo	9		Sh	eet: 1 of	14
Date Start	ed:	03/31/2	2022			e Elevatio		622.31 ft amsl	- Borin	a No.:	: <u>TCS-1 P</u>	ilot
Date Com	•					ng (NAD8	,	2101167.19		-		
Drilling Co		Casca			-	g (NAD83	3):	7615165.89	_ Client:	PG&E		~ ~
Drilling Me		Sonic	•		Total D	•	tor	280 ft bgs	•		<u>W Remedy Pl</u> Topock, Need	
Drill Rig Ty Driller Nan	-	Matt A	<u>_ongyear drill</u> rpold	neau		ole Diame to First W		<u>4-7 inches</u> 167.5 ft bgs		FGAL	TOPOCK, NEED	
Drilling As			ppner / R We	est		ng Metho		4 inch x 10 ft. Core Barrel	Project N	umber:	30126255	
Logger:		Ellen F	• •		-	ng Interva		<u>Continuous</u>	_ 110,00011		00120200	
Editor:			McGrane			rted to W		X Yes No				
Depth (ft) Recovery	E Sar	Sieve nple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
 1 				Fill	N/A			) Backfill used to grade drilling pad.			(0.0 - 1.5') Air-knifed for utility clearance. Logged from	(0.0 - 1.5') No drilling fluid used
2 3 4				Fill	N/A	· K X X X X	1.5-4.5 natrix.	ft) Boulders, cobbles and pebbles su	upported in a sa	ndy	air-knifing observations. (1.5 - 4.5') Air-knifed for utility clearance. Logged from air-knifing observations.	(1.5 - 4.5') No drilling fluid used
9. - 5 _ 9.  - 6 - 7 - 7 - 8 	5			Fluvial Deposits	SM		4.5-9 ft oid.	) Silty sand material that sloughed in	to hole creating	large	(4.5 - 9.0') Air-knifed for utility clearance. Logged-from air knifing observations. Water added to help with sands sloughing into hole.	(4.5 - 9.0') 20 gallons of water used; 0 gallons of water recovered; 20 gallons of water lost
9  10		Sieve	No Groundwater	Fluvial	NR		9.5-10.	) No Recovery. 5 ft) Well graded sand with gravel (S /3); very fine to coarse grained, suba			(9.0 - 12.0') Completed air-knifing on 4/1/22.	(9.0 - 12.0') 20 gallons of water used; 0 gallons of
11 12 12 13 13 14 14	Coll	ected	Samples Collected	Deposits Fluvial Deposits	SP	di di di di	ebbles listurbe 10.5-15 ne to n ubangu ound; ti	nules, subangular to round; little sma , subangular to subround; dry. NOTE d due to air-knifing. f th) Poorly graded sand (SP); very pa redium grained, trace very fine and c ular to subround; trace small to large race granules, subangular to round; to bed by air-knifing.	: Sample was le brown (10YR oarse grained, pebbles, subro	und to	(9.5 - 17.0') Normal drilling	water recovered; 20 gallons of water lost (9.5 - 17.0') No drilling fluid used
15				Fluvial Deposits	SW	<b>*****</b>	10YR 6	ft) Well graded sand with gravel (S\ /2); fine to very coarse grained, angu	lar to subround	; and		
16 17 18 18 7 19 				Fluvial Deposits	sw		mall to 5 subro 15.5-23 10YR 7 ttle gra	véry large, angular to subround; little und; dry. 3 ft) Well graded sand with gravel (S\ //3); very fine to coarse grained, suba nules, subangular to round; little sma , subangular to subround; trace silt; f	e granules, suba W); very pale br Ingular to subro all to very large	angular own	(17.0 - 37.0') Soft drilling	(17.0 - 37.0') No drilling fluid used
 Abbreviatio	ons: US	SCS = l	Jnified Soil Cl	assificatio	n Systei	<u>⊮″∘°∘°∘°</u> m, ft = fee	et, bạ	s = below ground surface, an	nsl = above r	nean se	a level, NR =	No Recoverv
					•			es: Solid blue and hollow blue				
			<u> </u>					ng the first VAS interval, resp			• • •	
			ction of sedim	onte in the	ore h	20		· · ·				

AR	CAD	IS		Bo	oring	Lo	9				She	et: 2 of	14
Date Started:	03/31/	/2022		Surfac			<u>622.31 ft</u>			Borine	a No.:	TCS-1 P	ilot
Date Comple				Northir			<u>2101167.</u>				-		
Drilling Co.:	Casca			Easting		33):	<u>7615165.</u>				PG&E		
Drilling Metho		•	bood		•	otori	280 ft bgs					<u>N Remedy Pl</u>	
Drill Rig Type Driller Name:		Longyear drill	neau	Boreho			<u>4-7 inche</u> 167.5 ft b			Location.	PGQE I	Fopock, Need	
Drilling Asst:		eppner / R We	st	Sampli				gs 0 ft. Core Ba	arrel	Project Ni	Imber :	30126255	
Logger:		Redner	<u>or</u>	Sampli	-		Continuo			110,000110		00120200	
Editor:		McGrane		Convei	-		⊠ Yes	No					
Depth (ft) Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class			Soil Descri	ption			Drilling Notes	Drilling Fluid
21 22 22			Fluvial Deposits	sw		(10YR 7 little gra	//3); very fine f nules, subang	ed sand with gra o coarse graine gular to round; li o subround; trad	ed, subang ttle small f	ular to subrou to very large			
_23			Fluvial Deposits	SM				GM); light gray ( o subround; little			ne		
_24 25 26 26			Fluvial Deposits	SW-SM		(10YR 7 some sr	/2); very fine f nall to large p	I sand with silt a o very coarse g ebbles, subang ittle silt; trace c	rained, su ular to rou	bangular to ro	und;		
_27 _28 _28 _29 _30 _31 _31 _32 _33 _33 _33	No Sieve Samples Collected	No Groundwater Samples Collected		NR		(27-34.	ft) No Recov	ery — — — —					
35 362.5 37 37 38 8 39 40			Fluvial Deposits	SM		fine to fi large pe to subro	ne grained, su bbles, suban und; trace cla		óround; litt	e silt; little sn anules, suba	hall to ngular	(37.0 - 40.0') Soft drilling	(37.0 - 40.0') No drilling flui used
		Unified Soil Cl		•		-							
-	•	N = groundwa											
<b>-</b> ,		om logging an	-			ed duri	ng the first	VAS interva	l, respec	tively. App	arent pa	rtial recoverie	s can be th
esult of pote	ntial compa	ction of sedim	ents in the	e core b	ag.								

ate Started: ate Completed rilling Co.: rilling Method: rill Rig Type: riller Name: riller Name: rilling Asst: ogger: ditor:	Casca Sonic Boart I Matt A D Hoe Ellen F	2022 de		Northir	e Eleva		Boring	No.:	TCS-1 P	ilot
rilling Co.: rilling Method: rill Rig Type: riller Name: rilling Asst: ogger: ditor:	Casca Sonic Boart I Matt A D Hoe Ellen F	de Drilling			να (ΝΙΔΓ					
rilling Method: rill Rig Type: riller Name: rilling Asst: ogger: ditor:	<u>Sonic</u> <u>Boart I</u> <u>Matt A</u> <u>D Hoe</u> <u>Ellen F</u>	Drilling						•		
rill Rig Type: riller Name: rilling Asst: ogger: ditor:	<u>Boart I</u> <u>Matt A</u> <u>D Hoe</u> <u>Ellen F</u>	•		-	) (NAD			PG&E		
riller Name: rilling Asst: ogger: ditor:	<u>Matt A</u> <u>D Hoe</u> <u>Ellen F</u>	<u>_ongyear drill</u>		Total D	•	<u>280 ft bgs</u>	•		V Remedy P	
rilling Asst: ogger: ditor:	<u>D Hoe</u> Ellen F	roold			ole Dian			G&E I	opock, Need	lies California
ogger: ditor:	<u>Ellen F</u>			•		Water: <u>167.5 ft bgs</u> hod: <u>4 inch x 10 ft. Core Bar</u>	 rol Drojoot Nu	mbor: 2	0126255	
ditor:					ng Met ng Inte				00120200	
		McGrane			rted to					
tt) ft	<u>000111</u>									
	Sieve ample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Descrip			Drilling Notes	Drilling Fluid
			Fluvial Deposits	CL		(40-41 ft) Lean clay with sand (CL); we plasticity, slow dilatancy; little silt; little grained sand, subangular to subround subround; trace small to large pebbles	very fine to very coarse trace granules, angula	e		
.42			Fluvial Deposits	SC		medium stiff; dry; NOTE: Compliance clay.	otified about presence	1	(41.0 - 47.0') Hard drilling	(41.0 - 47.0') No drilling flui used
.438 .44			Fluvial Deposits	СН		<ul> <li>(41-42 ft) Clayey sand (SC); light yellor fine to fine grained, subangular to subid dry to moist; nodules and lens of Lean slow dilatancy; throughout unit. NOTE presence of clay.</li> <li>(42-44 ft) Fat clay (CH); reddish brown dilatancy; little silt; very stiff; moist. NC about presence of clay.</li> </ul>	bund; some clay; little clay (CL); medium pla Compliance notified a (5YR 4/3); high plastic	silt; sticity, bout sity, no		
45			Fluvial Deposits	CL		(44-45 ft) Lean clay (CL); weak red (7. plasticity, slow dilatancy; some silt; littl subangular to subround; soft; dry; NO	very fine grained san	d,		
.46			Fluvial Deposits	SM		about presence of clay. (45-47 ft) Silty sand (SM); weak red (7. coarse grained, subangular to subrour	5R 5/2); very fine to ve	/		
.50 S	o Sieve amples ollected	No Groundwater Samples Collected	Alluvium Deposits	sw		(47-55 ft) Well graded sand with grave 5/2); very fine to very coarse grained, a small to large pebbles, angular to subr to subround; little silt; dry.	ngular to subround; so	me	(47.0 - 57.0') Hard drilling	(47.0 - 57.0') No drilling flui used
			Alluvium Deposits	CL		(55-56 ft) Sandy lean clay (CL); brown rapid dilatancy; some silt, little very fin sand, angular to subround; trace grant trace small to large pebbles, angular to	to very coarse graine es, angular to subrou	d nd;		
 57 58 59 60			Alluvium Deposits	SM		(Solution of the people's, and the second se	ence of clay. ayish brown (10YR 5/ r to subround; little sm e silt; little granules, a	2); all to	(57.0 - 67.0') Hard drilling	(57.0 - 67.0') No drilling flui used
						feet, bgs = below ground surfac				
		<u> </u>				n, Notes: Solid blue and hollow				
gs.) first encou sult of potentia						ed during the first VAS interval,	respectively. Appa	arent pa	rtial recoverie	s can be th

	RCAD	S		Bc	oring	g Lo	g				She	eet: 4 of	14
Date Started				Surface			<u>622.31 ft a</u>			Borin	g No.:	TCS-1 P	ilot
	eted: <u>04/13/</u>			Northin			<u>2101167.1</u>				-		
Drilling Co.:	<u>Casca</u>			Easting		83):	<u>7615165.8</u>	9		Client:	PG&E		
Drilling Meth		•		Total D	•		280 ft bgs			Project:		W Remedy P	
Drill Rig Type		Longyear drill		Boreho			<u>4-7 inches</u>			Location:	PG&E	Topock, Need	lies California
Driller Name				•			<u>167.5 ft bg</u>			Draigat N	umboru (	20126255	
Drilling Asst:		ppner / R We Redner		Sampli Sampli	-		<u>Continuous</u>	ft. Core Bar		Projectin	umper.	30126255	
₋ogger: Editor:		VcGrane		Conver	-		∑ Yes	No					
Depth (ft) Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class			Soil Descrip				Drilling Notes	Drilling Fluid
61 62 63 63 64 65 66 66			Alluvium Deposits Alluvium Deposits	SM ML		very fine large pe to subro (64.5-65 (65-66 f plasticit sand, au subrour stiff; dry	t) Silty sand wit to very coarse sbbles, angular und; little clay; 5 ft) Moist t) Sandy silt wit y, rapid dilatand ngular to subrou d; little clay; tra ; trace clay, nod t) Silty sand wit	grained, angul to subround, litt dry; trace clay r h gravel (ML); c sy; some very fii and; little small cce granules, ar ules.	ar to subrr tte silt; litti nodules. gravish bro ne to very to large p ngular to s	ound; little s e granules, pown (10YR 5 coarse grain ebbles, ang subround; sc	5/2); no ned ular to ff to		
67 68 69 70 71 72 7.5	No Sieve Samples Collected	No Groundwater Samples Collected	Alluvium Deposits	SW		very fine large pe to subro (69.5-70 (70.5-71	<ul> <li>a) Sing sand with sand with sand with sand with sand sand sand sand sand sand sand sand</li></ul>	grained, angul to subround; lit dry; trace clay r	ar to subr tle silt; litt nodules.	ound; little s	mall to angular	(67.0 - 77.0') Hard drilling	(67.0 - 77.0') No drilling fluid used
 _73 _74 _75 _76 _76 _77			Alluvium Deposits	SW		very fine very larg subrour	arge cobble	grained, angular to subroun	ar to subr	ound; little s	mall to		
77 78 79 79  			Alluvium Deposits	SM		very fine large pe subrour	t) Silty sand wit e to very coarse bbles, angular id; little silt; little	grained, angul to subround; lit e clay; dry.	ar to subr tle granule	ound, little s es, angular t	mall to o	(77.0 - 87.0') Hard drilling	(77.0 - 87.0') No drilling fluid used
		Unified Soil Cl		-		-	-						-
	•	V = groundwa										· · ·	
gs.) first en	countered fro	om logging an	d depth to	water i	measui	red duri	ng the first $\setminus$	/AS interval,	respec	tively. App	parent pa	artial recoverie	es can be th
	ential compa	ction of sedim	ents in the	core b	ad.								

9	<u> </u>	$C^{\Lambda}$	D	S		Bc	pring	l Fog	Sł	neet: 5 of	14
	started:			2022		Surface			Boring No.	: TCS-1 P	ilot
	Comple					Northin			<u>-</u>		
Drilling			<u>Casca</u>			Easting			Client: <u>PG&amp;E</u>		
-	Metho			Drilling		Total D	•	280 ft bgs	•	W Remedy Pl	
	g Type Name:			<u>Longyear drill</u> Irnold		Boreho		neter: <u>4-7 inches</u> Water: <u>167.5 ft bgs</u>	Location: PG&E	Тороск, мееа	ies California
		-		ppner / R We		Sampli		•	- Project Number:	20126255	
Drilling				Redner		Sampli	-			30120233	
Logge Editor:				McGrane		Conver	-		-		
		<u> </u>									
Depth (ft)	Recovery (ft)		eve ble ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
 81 					Alluvium Deposits	SM		(77-82 ft) Silty sand with gravel (SM); grayish b very fine to very coarse grained, angular to sub large pebbles, angular to subround; little granu subround; little silt; little clay; dry. (80-81 ft) Moist	pround; little small to		
82 83 84 84	7.6				Alluvium Deposits	SC		(82-85 ft) Clayey sand with gravel (SC); light ye 6/4); very fine to very coarse grained, angular t clay; little small to very large pebbles, angular trace granules, angular to subround; dry.	o s <mark>ubr</mark> ound; some		
85 86 87					Alluvium Deposits	SW-SN		(85-87 ft) Well graded sand with silt and grave brown (10YR 5/2); very fine to very coarse grai subround; little small to large pebbles, angular granules, angular to subround; little silt; trace of	nèd, angular to to subround; little clay; dry.	(07.0 07.0)	(07.0 07.0)
 88  89					Alluvium Deposits	SC		(87-89.5 ft) Clayey sand with gravel (SC); brow fine to very coarse grained, angular to subround very large pebbles, angular to subround; little of granules, angular to subround; dry; nodules of	d; some small to clay; little silt; little	(87.0 - 97.0') Hard drilling	(87.0 - 97.0') No drilling flui used
90 90 91		No Si Samp Colleo	les	No Groundwater Samples Collected	Alluvium Deposits	CL		(89.5-91 ft) Gravelly lean clay with sand (CL); I low to medium plasticity, slow dilatancy; some pebbles, angular to subround; little silt; little we grained sand, angular to subround; trace gram subround; very stiff; dry; nodules of hard clay w (91-92 ft) Silty sand with gravel (SM); brown (1	small to very large ry fine to very coarse ules, angular to vithin unit.		
 92	7.8				Alluvium Deposits	SM	619178	very coarse grained, angular to subround; som pebbles, angular to subround; little silt; little cla angular to subround; dry; nodules of hard clay	e small to very large ay; trace granules, within unit.		
93					Alluvium Deposits	CL	\$ \$ \$	(92-93 ft)Gravelly lean clay with sand (CL); broc to medium plasticity, slow dilatancy; some sma pebbles, angular to subround; little silt; little ve grained sand, angular to subround; trace gran	all to very large ry fine to very coarse ules, angular to		
94 95 96					Alluvium Deposits	SM		subround; very stiff; dry; nodules of hard clay w (93-97 ft) Silty sand with gravel (SM); brown (1 very coarse grained, angular to subround; little pebbles, angular to subround; little cla angular to subround; dry; nodules of hard clay	OYR 5/3); very fine to small to very large ay; trace granules,		
_97 _98 _98 _99	7.6				Alluvium Deposits	SC		(97-102 ft) Clayey sand with gravel (SC); brown fine to very coarse grained, angular to subroun silt; little small to large pebbles, angular to sub granules, angular to subround; dry; nodules of	d; some clay; little bround; trace	(97.0 - 107.0') Hard drilling	(97.0 - 107.0' No drilling flui used
100 Abbrev	viations	: US	CS = 1	Unified Soil Cl	assificatior	n Syster	n, ft = 1	eet, bgs = below ground surface, am	sl = above mean s	ea level, NR = l	No Recover
						-		n, Notes: Solid blue and hollow blue v			
		•	-					ed during the first VAS interval, respe		· · ·	
J / "				ction of sedim	•			<u> </u>	, , , ,		

<u>Matt A</u> <u>D Hoe</u> <u>Ellen F</u>	2022 de Drilling ongyear drill rnold ppner / R We	head   	Northin Easting Total D Boreho Depth Sampli Sampli	ole Dian	2101167.19         33):       2101167.19         33):       7615165.89       Ci         280 ft bgs       Prince         neter:       4-7 inches       Lo         Water:       167.5 ft bgs       Prince         nod:       4 inch x 10 ft. Core Barrel       Prince         val:       Continuous       Prince	roject Number: 5	N Remedy Ph Topock, Need	nase 2A
Casca Sonic Boart L Matt A D Hoe Ellen F Sean M	de Drilling Longyear drill rnold ppner / R We Redner McGrane	head   head   est   bot content   head   hea	Easting Total D Borehc Depth Sampli Sampli Conver	g (NAD bepth: ble Dian to First ng Met ng Inte	2101167.19       □         33):       7615165.89       Ci         280 ft bgs       Pressor         heter:       4-7 inches       Lo         Water:       167.5 ft bgs       Pressor         hod:       4 inch x 10 ft. Core Barrel       Pressor         val:       Continuous       Pressor         Vell:       X Yes       No         Soil Description         (97-102 ft) Clayey sand with gravel (SC); brown (7 fine to very coarse grained, angular to subround; sit; little small to large pebbles, angular to subround; solution	lient: <u>PG&amp;E</u> roject: <u>Final G</u> ocation: <u>PG&amp;E 1</u> roject Number: <u>5</u>	W Remedy Ph Fopock, Need 30126255	nase 2A les California
: <u>Sonic</u> <u>Boart I</u> <u>Matt A</u> <u>D Hoe</u> <u>Ellen F</u> <u>Sean N</u> Sieve	Drilling Longyear drill rnold ppner / R We Redner McGrane	head   head   est   est   o Co est   O Co es	Total D Borehc Depth 1 Sampli Sampli Conver	Depth: De Dian to First ng Met ng Inte	280 ft bgs       Presented and the second sec	roject: Final G ocation: PG&E 1 roject Number: S .5YR 5/2); very some clay; little nd; trace	Topock, Need	les California
Boart L Matt A D Hoe Ellen F Sean N	Longyear drill rnold ppner / R We Redner McGrane Groundwater	head   est	Borehc Depth Sampli Sampli Conver	ble Dian to First ng Met ng Inte ted to V	heter: <u>4-7 inches</u> Lo Water: <u>167.5 ft bgs</u> hod: <u>4 inch x 10 ft. Core Barrel</u> Pr val: <u>Continuous</u> Vell: ⊠ Yes No Soil Description (97-102 ft) Clayey sand with gravel (SC); brown (7 fine to very coarse grained, angular to subround; s silt; little small to large pebbles, angular to subround; s	roject Number: 5	Topock, Need	les Californi
<u>Matt A</u> <u>D Hoe</u> <u>Ellen F</u> <u>Sean N</u> Sieve	rnold ppner / R We Redner McGrane Groundwater	Alluvium	Depth t Sampli Sampli Conver	to First ng Met ng Inte ted to <sup>v</sup>	Water: <u>167.5 ft bgs</u> hod: <u>4 inch x 10 ft. Core Barrel</u> Pr val: <u>Continuous</u> Vell: X Yes No Soil Description (97-102 ft) Clayey sand with gravel (SC); brown (7 fine to very coarse grained, angular to subround; s silt; little small to large pebbles, angular to subround; s	.5YR 5/2); very come clay; little nd; trace	30126255	
<u>Ellen F</u> <u>Sean N</u> <sub>Sieve</sub>	Redner McGrane Groundwater	est st Local State Local State Alluvium	Sampli Sampli Conver	ng Met ng Inte rted to <sup>v</sup>	hod: <u>4 inch x 10 ft. Core Barrel</u> Pr val: <u>Continuous</u> Vell: ⊠ Yes <u>No</u> Soil Description (97-102 ft) Clayey sand with gravel (SC); brown (7 fine to very coarse grained, angular to subround; s silt; little small to large pebbles, angular to subround; s	.5YR 5/2); very some clay; little nd; trace		Drilling Fluic
Sieve	McGrane Groundwater	Geoodic Formation Huivulla		rted to	Well:       Xes       No         Soil Description         (97-102 ft) Clayey sand with gravel (SC); brown (7 fine to very coarse grained, angular to subround; s silt; little small to large pebbles, angular to subround; s	ome clay; little nd; trace	Drilling Notes	Drilling Fluid
Sieve	Groundwater	Geologic Geologic Formation	USCS Code		Soil Description (97-102 ft) Clayey sand with gravel (SC); brown (7 fine to very coarse grained, angular to subround; s silt; little small to large pebbles, angular to subrou	ome clay; little nd; trace	Drilling Notes	Drilling Fluid
		Alluvium		USCS	(97-102 ft) Clayey sand with gravel (SC); brown (7 fine to very coarse grained, angular to subround; s silt; little small to large pebbles, angular to subrou	ome clay; little nd; trace	Drilling Notes	Drilling Fluic
			SC		fine to very coarse grained, angular to subround; s silt; little small to large pebbles, angular to subrou	ome clay; little nd; trace		
				/////				
		Alluvium Deposits	SW-SM		(102-107 ft) Well grade sand with silt and gravel (5 (10YR 5/3); very fine to very coarse grained, angul little small to large pebbles, angular to subround; I angular to subround; little silt; trace clay; dry.	ar to subround;		
No Sieve	No	Alluvium Deposits	SC		(107-109.5 ft) Clayey sand with gravel (SC); brown fine to very coarse grained, subangular to subroun some silt; little small to medium pebbles, angular to trace granules, angular to subangular; dry to moist (109-112 ft) Moist (109.5-110.5 ft) Clayey sand (SC); brown (10YR 5/	d; some cláy; to subround; t.	(107.0 - 117.0') Hard drilling	(107.0 - 117.0') No drilling flui used
Samples Collected	Groundwater Samples Collected	Deposits	SC		very coarse grained, angular to subround; some cl granules, angular to subangular; trace small to me angular to subangular; moist. (110.5-112 ft) Clayey sand with gravel (SC); brown	lay; little silt; trace edium pebbles, n (10YR 5/3); very		
		Deposits	SC		some silt; little small to medium pebbles, angular t trace granules, angular to subangular; dry to moist (112-114 ft) Silty sand with gravel (SM); grayish br	to subround; t. own (10YR 5/2);		
		Alluvium Deposits	SM					
		Alluvium Deposits	SM		very fine to very coarse grained, subangular to sub	pround; some silt;		
							(117.0 - 127.0') Hard drilling	(117.0 - 127.0') No drilling flu used
		Alluvium Deposits	CL		plasticity, slow dilatancy; some silt; little very fine to	o very coarse		
			-	-				
							• • •	
		•			ed during the first VAS interval, respectiv	ely. Apparent pa	rtial recoverie	s can be th
	JSCS = L cable, GV ntered fro	JSCS = Unified Soil C cable, GW = groundwater Samples Collected	O Sleve amples ollected       Groundwater Samples Collected       Alluvium Deposits         O Sleve all Collected       Alluvium Deposits       Alluvium Deposits         Alluvium Deposits       Alluvium Deposits       Alluvium Deposits         JSCS = Unified Soil Classification cable, GW = groundwater, ppb = ntered from logging and depth to       Alluvium Deposits	o Sleve amples ollected       Groundwater Samples Collected       Alluvium Deposits       SC         Alluvium Deposits       SC         Alluvium Deposits       SM         Alluvium Deposits       SM         Alluvium Deposits       SM         Alluvium Deposits       SM         Alluvium Deposits       SM         Alluvium Deposits       SM         Alluvium Deposits       CL         JSCS = Unified Soil Classification System cable, GW = groundwater, ppb = parts p intered from logging and depth to water	O Sleve amples collected       Groundwater Samples Collected       Alluvium Deposits       SC         Alluvium Deposits       SC         Alluvium Deposits       SM         Alluvium Deposits       SM         Alluvium Deposits       SM         Alluvium Deposits       SM         Alluvium Deposits       SM         Alluvium Deposits       SM         Alluvium Deposits       CL         JSCS = Unified Soil Classification System, ft = ft cable, GW = groundwater, ppb = parts per billio	o Sieve amples ollected       No Groundwater Samples Collected       Alluvium Deposits       SC       (109.5-110.5 ft) Clayey sand (SC); brown (10YR 5 very coarse grained, angular to subround; some of granules, angular to subangular; trace small to me dium pebbles, angular to subangular; moist.         Alluvium Deposits       SC       (110.5-112 ft) Clayey sand with gravel (SC); brown (10YR 5 very coarse grained, subangular; trace small to me dium pebbles, angular to subangular; moist.         Alluvium Deposits       SC       (110.5-112 ft) Clayey sand with gravel (SC); brown (fto the very coarse grained, subangular to subangular; trace granules, angular to subangular; trace granules, angular to subangular, dry to mois some siti; little small to medium pebbles, angular to subangular; moist.         Alluvium Deposits       SM       (114-119 ft) Silty sand with gravel (SM); grayish brivery fine to very coarse grained, subangular to subangular to subangular; moist.         Alluvium Deposits       SM       (114-119 ft) Silty sand with gravel (SM); grayish brivery fine to very coarse grained, subangular to subangular to subangular; moist.         Alluvium Deposits       SM       (114-119 ft) Lean clay with sand (CL); brown (7.5) plasticity, slow dilatancy; some silt; little very fine to grained sand, subangular to subangular; dry.         Alluvium Deposits       SM       (119-120 ft) Lean clay with sand (CL); brown (7.5) plasticity, slow dilatancy; some silt; little very fine to grained sand, subangular to subround; trace grained sand, subangular to subround; tr	o Sieve amples ollected       No Groundwater Samples Collected       Alluvium Deposits       SC       (109.5-110.5 ft) Clayey sand (SC); brown (10YR 5/3); very fine to very coarse grained, angular to subround; some clay; little sell; trace angular to subangular; moist.         Alluvium Deposits       SC       (110.5-112 ft) Clayey sand with gravel (SC); brown (10YR 5/3); very fine to very coarse grained, subangular; trace small to medium pebbles, angular to subangular; down (10YR 5/3); very fine to very coarse grained, subangular to subround; some clay; trace granules, angular to subangular to subround; trace show (SC); brown (10YR 5/2); very fine to very coarse grained, subangular to subround; some sit; some sit; little small to medium pebbles, angular to subround; trace granules, angular to subangular; moist.         Alluvium Deposits       SM       (114-119 ft) Silty sand with gravel (SM); grayish brown (10YR 5/2); very fine to very coarse grained, subangular to subround; some silt; trace granules, angular to subangular; moist.         Alluvium Deposits       SM       (114-119 ft) Silty sand with gravel (SM); grayish brown (10YR 5/2); very fine to very coarse grained, subangular to subround; trace granules, angular to subangular; moist.         Alluvium Deposits       SM       (119-120 ft) Lean clay with sand (CL); brown (7.5YR 5/3); medium plasticity, slow dilatancy; some silt; little very fine to very coarse grained sand, subangular to subround; trace granules, subangular         JSCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sec scable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks re intered from logging and depth to water measured during t	o Sieve amples Ollected       No Groundwater Samples Collected       Alluvium Alluvium Deposits       C       (109.5-110.5 ft) Clayey sand (SC); brown (10YR 5/3); wery fine to very coarse grained, angular to subround; some clay; little silt; trace angular to subangular; trace small to medium pebbles, angular to subangular to subround; some clay; fine to very coarse grained, subangular to subround; some silt; some clay; little small to medium pebbles, angular to subround; some silt; some clay; little small to medium pebbles, angular to subround; some silt; some clay; little small to medium pebbles, angular to subround; some silt; some clay; little small to medium pebbles, angular to subround; trace granules, angular to subangular; moist.         Alluvium Deposits       SM       (112-114 ft) Silty sand with gravel (SM); grayish brown (10YR 5/2); very fine to very coarse grained, subangular to subround; some silt; little cay; little small to medium pebbles, angular to subround; trace granules, angular to subangular; moist.         Alluvium Deposits       SM       (114-119 ft) Silty sand with gravel (SM); grayish brown (10YR 5/2); very fine to very coarse grained, subangular to subround; trace granules, angular to subangular; moist.         Alluvium Deposits       SM       (119-120 ft) Lean clay with sand (CL); brown (7.5YR 5/3); medium plasticity, slow dilatancy; some silt; little very fine to very coarse grained subangular; trace granules, subangular         JSCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = 1 trable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks represent deptil thereed from logging and depth to water measured during the first VAS interval, respectively. Apparent

AR	CAD	IS		Bo	oring	j Lo	9		She	eet: 7 of	14
Date Started:		1/2022		Surface			622.31 ft amsl	- Borin	q No.:	TCS-1 P	ilot
Date Comple				Northin			2101167.19		-		
Drilling Co.:	<u>Case</u>			Easting	•	83):	7615165.89	Client:	PG&E	A/ D D	h 0 A
Drilling Metho Drill Rig Type		<u>c Drilling</u> t Longyear drill	bood	Boreho	•	notor	280 ft bgs 4-7 inches	Project:		<u>W Remedy P</u> Topock, Need	
Driller Name:		Arnold	neau				<u>4-7 inches</u> 167.5 ft bgs		FORE	I UPUCK, NEEL	
Drilling Asst:		eppner / R We	est	Sampli			4 inch x 10 ft. Core Barrel	Proiect N	lumber:	30126255	
.ogger:		Redner		Sampli	-		Continuous				
Editor:	Sear	McGrane		Conver	-		🛛 Yes 🗌 No				
Depth (ft) Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
	No Sieve Samples Collected	No Groundwater Samples Collected	Alluvium Deposits Alluvium Deposits Alluvium	SM ML		subrour (120-12 5/2); ve some si subrour (125.5 plasticit sand, si subrour stiff, dry (127-13 rapid dil subangu angular soft; dry	0 ft) Sandy silt (ML); grayish brown ( atancy; some very fine to very coars ular to subround; little clay; little sma to subround; trace granules, angula	ayish brown (10 gular to subrou gular to subrou ibbles, angular ular; dry.	nd; to lay; no ed o bbround; lasticity, pebbles, very very silt; little	(127.0 - 137.0') Hard drilling	(127.0 - 137.0') No drilling flui used
_131_ 			Alluvium Deposits Alluvium Deposits	SM SW-SC		granule: (132-13 brown () subrour clay; tra (135-13	s, angular to subangular; dry. 5 ft) Well graded sand with clay and 7.5YR 5/3); very fine to very coarse g d; little small to large pebbles, angul ce silt; trace granules, angular to sul 7 ft) Silty sand with gravel (SM); brow	gravel (SW-SC rained, subang ar to subround; bangular; dry.	); ular to little very		
_136  _137			Alluvium Deposits	SM		fine to v very larg subangi	ery coarse grained, subangular to su je pebbles, angular to subround; little Jlar; little silt; little clay; dry.	bround; little sr e granules, ang	nall to ular to	(407.0	(407.0
 			Alluvium Deposits	SM		fine to v small to	7 ft) Silty sand with gravel (SM); brow ery coarse grained, subangular to su very large pebbles, angular to subro s, angular to subangular; dry; nodule	bround; some s ound; little clay;	silt; little trace	(137.0 - 142.0') Hard drilling	(137.0 - 142.0') No drilling flu used
bbreviations	s: USCS =	Unified Soil C	lassificatio	n Syster	n, ft = 1	feet, bg	s = below ground surface, ar	nsl = above	mean se	a level, NR =	No Recover
I/A = Not Ap	plicable, C	SW = groundw	ater, ppb =	parts p	er billio	n, Note	es: Solid blue and hollow blue	water table	marks re	present dept	h to water (f
gs.) first end	countered	from logging a	nd depth to	water i	neasui	red duri	ng the first VAS interval, resp	ectively. App	parent pa	artial recoverie	s can be th
esult of pote	ntial comp	action of sedim	nents in the	e core ba	ag.						

ARC	AD	S		Bo	oring	Log	Sh	eet: 8 of	14
Date Started: Date Completed:		2022		Surface Northin	g (NAE	33): <u>2101167.19</u>	Boring No.	: <u>TCS-1 P</u>	<u>'ilot</u>
Drilling Co.: Drilling Method: Drill Rig Type:		ide Drilling Longyear drill		Easting Total D Boreho	epth:	280 ft bgs		W Remedy P Topock, Need	
Driller Name: Drilling Asst:		ppner / R We	st	Samplii	ng Metl		_ _ Project Number:	30126255	
.ogger: Editor:		<u>Redner</u> McGrane		Samplii Conver	•		_		
42 02	Sieve ample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
_1413.7						137-147 ft) Silty sand with gravel (SM); brow ine to very coarse grained, subangular to sul mall to very large pebbles, angular to subrou ranules, angular to subangular; dry; nodules init.	bround; some silt; little und; little clay; trace	(142.0 -	(142.0 -
			Alluvium Deposits	SM		143 ft) 2-inch lens with some clay, low-medi lilatancy.	um plasticity, rapid	152.0') Hard drilling	152.0') No drilling flu used
148_ 	Sieve mples llected	No Groundwater Samples Collected	Alluvium Deposits	SM		147-152 ft) Silty sand with gravel (SM); brow ne to very coarse grained, subangular to sul ery large pebbles, angular to subround, little ranules, angular to subangular; dry; nodules init.	pround; little small to silt; little clay; trace		
			Alluvium Deposits	ML		152-152.5 ft) Sandy silt (ML); grayish brown lasticity, rapid dilatancy; some clay; some w rained sand, angular to subround; trace gra	ery fine to very coarse	(152.0 - 162.0') Hard drilling	(152.0 - 162.0') No drilling flu
			Alluvium Deposits	SM		ubangular; trace small to medium pebbles, nedium stiff; moist. 152.5-154.5 ft) Silty sand with gravel (SM); g //2); very fine to very coarse grained, subang ome silt; little small to very large pebbles, at ttle clay; trace granules, angular to subangu	angular to subangular; rayish brown (10YR ular to subround; ngular to subround;		used
.155  _1567.3  _157   			Alluvium Deposits	SM		ard clay within unit. 154.5-164 ft) Silty sand with gravel (SM); bro ne to very coarse grained, subangular to sub mall to large pebbles, angular to subangular ingular to subangular; dry; nodules of hard c	wn (7.5YR 5/3); very pround; some silt; little ; trace granules,		
_159									
_159  160									
160 bbreviations: U						et, bgs = below ground surface, am , Notes: Solid blue and hollow blue			

9	<u> </u>	2CAE	DIS		Bo	pring	j Log	Sł	neet: 9 of	14
	tarted	<u>03/</u>	31/2022		Surfac	e Eleva		Boring No.	: TCS-1 P	ilot
	comple		13/2022			ng (NAI			-	
Drilling			scade			g (NAD	,	Client: <u>PG&amp;E</u>		
-	Metho		nic Drilling		Total D		280 ft bgs	•	W Remedy P	
	g Туре		art Longyear dri t Arraald			ble Diar		Location: PG&E	lopock, Need	lles Californ
	Name: Asst:		t Arnold		•		Water: <u>167.5 ft bgs</u>	Draigat Number	20126255	
.ogge			<u>loeppner / R W</u> n Redner		•	ng Mel ng Inte		Project Number:	30120255	
Editor:			an McGrane		•	rted to				
Depth (ft)	Recovery (ft)	Sieve Sample	Groundwate D Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
 	7.3	TCS-1-SS 159-164 4/13/2022	Groundwater Samples	Alluvium Deposits	SM		(154.5-164 ft) Silty sand with gravel (SM); brow fine to very coarse grained, subangular to subr small to large pebbles, angular to subangular; angular to subangular; dry; nodules of hard cla	ound; some silt; little trace granules,	(162.0 -	(162.0 -
_163 _ _164		14:30	Collected				(164-165 ft) Silty sand with gravel (SM); brown	(10YR 5/3); very fine	170.0') Hard drilling	170.0') No drilling flu used
_165				Alluvium Deposits	SM		to very coarse grained, subangular to subround trace granules, subangular to subround; trace subangular to subround; wet.	d; little silt; little clay; small pebbles,		
_166	6.5		TCS-1-VAS- 164-169	Alluvium Deposits	SM		(165-166 ft) Silty sand with gravel (SM); brown fine to very coarse grained, subangular to subr small to medium pebbles, angular to subangul granules, angular to subround; dry.	ound; some silt; little		
467		TCS-1-SS 164-170		Alluvium Deposits	SM		(166-167 ft) Silty sand with gravel (SM); brown		¥	
167		4/13/2022 15:10	2 10:50	Alluvium	SM		fine to very coarse grained, subangular to subr clay, trace granules, subangular to subround; t	race small to		
 		15:10		<u>Deposits</u> Alluvium Deposits	SM		medium pebbles, subangular to subround; wet (167-167.5 ft) Silty sand (SM); brown (7.5YR 5 coarse grained, subangular to subround; some granules, subangular to subround; trace small subangular to subround; dry. (167.5-170 ft) Silty sand (SM); brown (7.5YR 5 coarse grained, subangular to subround; little s	<ul> <li>/3); very fine to very</li> <li>silt; little clay; trace</li> <li>to medium pebbles,</li> <li>/3); very fine to very</li> <li>silt; little clay; trace</li> </ul>		
_170			_	Alluvium Deposits	ML		granules, subangular to subround; trace small subangular to subround; wet. (170-171 ft) Silt with sand (ML); brown (7.5YR medium plasticity, rapid dilatancy; little very fin	5/3); and clay; low to e to very coarse	(170.0 - 177.0') Hord drilling	(170.0 - 177.0')
171 172 173 173 174	5	TCS-1-SS 170-176 4/13/2022 15:18					grained sand, angular to subround; trace grant subround; trace small pebbles, angular to subr dry to moist. (171-182 ft) Sandy silt (ML); brown (10YR 5/3) dilatancy; some very fine to very coarse graine subround; little clay; trace granules, angular to small to medium pebbles, angular to subround moist.	ules, angular to ound; medium stiff; ; no plasticity, rapid d sand, angular to subround; trace	Hard drilling	No drilling flu used
_175 _ _176 _ _177			_	Alluvium Deposits	ML		(175-179.5 ft) Moist		(177.0	(477.0
_ _178 _ _179 _	7.6	TCS-1-SS 176-182 4/13/2022 15:25							(177.0 - 187.0') Normal drilling	(177.0 - 187.0') No drilling flu used
180 \bbrev	/iations	s: USCS	= Unified Soil (	Classification	Syste	m, ft =	feet, bgs = below ground surface, ams	sl = above mean s	ea level, NR =	No Recover
/A =	Not Ap	plicable,	GW = groundw	vater, ppb =	parts p	er billio	n, Notes: Solid blue and hollow blue v	vater table marks i	epresent dept	n to water (i
as) f	irst end	countered	I from logging a	and depth to	water	measu	red during the first VAS interval, respe	ctively. Apparent p	artial recoverie	s can be th

9	AR	$\mathbf{O}$	٩DI	S		Bo	pring	g Log	9	S	heet: 10 of	14
	tarted:		03/31/2			Surface			622.31 ft amsl	Boring No	.: TCS-1 P	lot
			04/13/2			Northin			2101167.19	_		
rilling			Casca			Easting		83):	7615165.89	_ Client: <u>PG&amp;E</u>		
-	Metho		Sonic I	•		Total D	•		280 ft bgs	•	<u>GW Remedy P</u>	
-	g Type Name:		Matt A	<u>ongyear drill</u>		Boreho			<u>4-7 inches</u> 167.5 ft bgs	_ Location: <u>PG&amp;E</u>		ales Californ
	Asst:			opner / R We		Sampli			4 inch x 10 ft. Core Barrel	 Project Number	20126255	
oggei			Ellen R	-	51	Sampli	-		<u>Continuous</u>		<u> </u>	
ditor:	•			//cGrane		Convei	-		X Yes No	_		
	>				<u>ں ج</u>							
Depth (ft)	Recovery (ft)		ieve nple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description		Drilling Notes	Drilling Flui
_ _181 _ _182					Alluvium Deposits	ML		dilatanc subroun small to moist.	2 ft) Sandy silt (ML); brown (10YR 5/3 y; some very fine to very coarse grain d; little clay; trace granules, angular t medium pebbles, angular to subrour 2 ft) Moist	ed sand, angular to o subround; trace		
- 183_ - 184_ - 185_ - 186_ - 187_	7.6	182 4/13	.1-SS- -187 /2022 :33					coarse dilatanc	4.5 ft) Silty sand (SM); brown (10YR i grained, angular to subround, and silt grained, angular to subround, and silt medium pebbles, angular to subrour sist.	; no plasticity, rapid o subangular; trace	(187.0 -	(187.0 -
- 188_ 189_ 190_ 191_ - 192_	3.7	187 4/13	-1-SS- -192 /2022 :39		Alluvium Deposits	SM		2			`192.0') Normal drilling	192.0') No drilling flu used
- 193_ - 194_ -	4.9	192	-1-SS- -197	TCS-1-VAS- 192-197	Allenáussa						(192.0 - 197.0') Normal drilling	(192.0 - 197.0') No drilling flu used
195			/2022 :45	(<0.025 ppb) 4/4/2022	Alluvium Deposits	SW		to very c	95 ft) Well graded sand (SW); browr coarse grained, subangular to subrou	nd; trace granules,		
4				09:45	Alluvium				to subround; trace small pebbles, su t; trace clay; wet.	bangular to subround;		
196					Deposits	ML		(195-19	6.5 ft) Sandy silt (ML); brown (10YR s			
4					Alluvium			subroun	y; and very fine to very coarse grained d; trace small to medium pebbles, ar	ngular to subround;		
97					Deposits	SW-SN			anules, angular to subangular; trace ( ; dry to moist.	clay; medium stiff to	(107.0	(197.0 -
- 98_ - 99_ -	7.2	197- 4/13	-1-SS- 200.5 /2022 :48		Alluvium Deposits	ML		(196.5-1 brown ( subroun subroun (197-20 plasticit grained	97 ft) Well graded sand with silt and 7.5YR 5/3); very fine to very coarse gr d; little silt; trace small to medium pe d; trace granules, angular to subrour 0.5 ft) Sandy silt with gravel (ML); bro y, rapid dilatancy; some clay; some v sand, angular to subround; little sma Jlar; trace granules, angular to suban	ained, subangular to bbles, subangular to d; trace clay; wet. wn (10YR 5/3); low ery fine to very coarse II pebbles, angular to	(197.0 - 206.0') Normal drilling	206.0')
						-		-	s = below ground surface, arr s: Solid blue and hollow blue			
						· ·			is: Solid blue and nollow blue ng the first VAS interval, respo		· · ·	
າວ. / 11						e core b		icu uuli	ng the mat vAS interval, resp	Souvery. Apparent p		s can be li

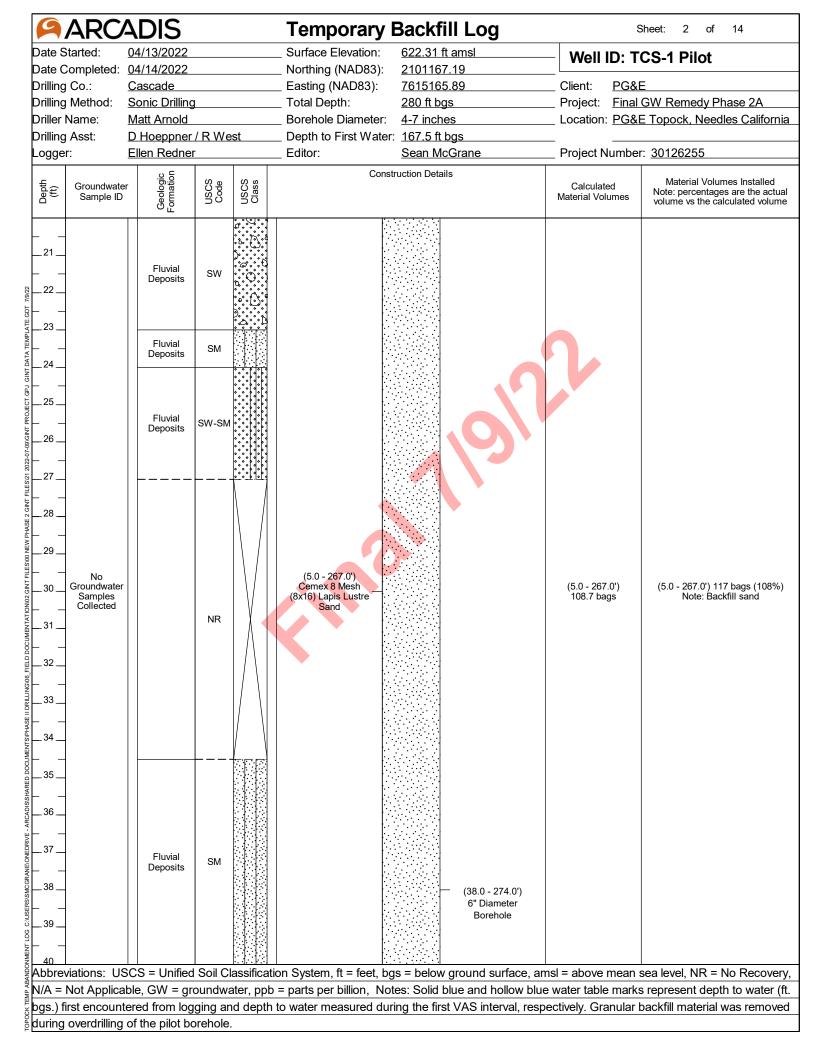
	<u>RCADI</u>	<u>S</u>		Bo	oring	g Log	Sh	eet: 11 of	14
ate Started				Surface			Boring No.	: TCS-1 P	ilot
ate Comple				Northin	•		_		
rilling Co.:	Cascad			Easting			Client: <u>PG&amp;E</u>		
rilling Meth rill Rig Type		<u>ongyear drill</u>	hood	Boreho	•	280 ft bgs neter: 4-7 inches	Project: <u>Final G</u> Location: <u>PG&amp;E</u>	W Remedy Ph	
riller Name						Water: 167.5 ft bgs		TOPOCK, Neeu	
rilling Asst:		opner / R We		Sampli			Project Number:	30126255	
ogger:	Ellen R	-		Sampli	•			00120200	
ditor:		IcGrane		Conver	-		-		
(ft) (ft) (ft) (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
_				ML					
201			Alluvium Deposits	ML		(200.5-202 ft) Sandy silt with gravel (ML); brow plasticity, rapid dilatancy; little very fine to very sand, subangular to subround; little clay; little pebbles, angular to subround; trace granules, subround; medium stiff; moist.	coarse grained small to large		
202_  2037.2  204 205	TCS-1-SS- 200.5-205.5 4/13/2022 15:51		Alluvium Deposits	ML		(202-206 ft) Sandy silt (ML); brown (10YR 5/3) dilatancy; little very fine to very coarse grained subround; little clay; trace granules, subangula small to large pebbles, angular to subround; n	sand, subangular to ar to subround; trace		
206 207			Alluvium Deposits	ML		(206-207.5 ft) Sandy silt with gravel (ML); brov plasticity, rapid dilatancy; some clay; little very grained sand, subangular to subround; little sr angular to subround; trace granules, subangul medium stiff; moist.	fine to very coarse nall to large pebbles, ar to subround;	(206.0 - 217.0') Normal drilling	(206.0 - 217.0') No drilling flu used
208 209 210 211	TCS-1-SS- 205.5-211 4/13/2022 15:54		Alluvium Deposits	ML		(207.5-214 ft) Sandy silt with gravel (ML); brow plasticity, rapid dilatancy; some very fine to ver sand, subangular to subround; little clay; trace subangular to subround; trace small to mediur subround; medium stiff; dry to moist. (209 ft) Color change to brown (10YR 5/3).	y coarse grained granules,		
- 8.8 212_ 213_ 213_ 214_	TCS-1-SS- 211-217		_ opcone						
_ 215 216 _	4/13/2022 15:57		Alluvium Deposits	SM		(214-217 ft) Silty sand with gravel (SM); reddis very fine to very coarse grained, subangular to little small to very large pebbles, subangular to trace granules, subangular to subround; moist	subround; some silt; round; little clay;		
217 218 219 220	TCS-1-SS- 217-221 4/13/2022 16:00		Alluvium Deposits	ML		(217-220 ft) Sandy silt with gravel (ML); reddis no plasticity, rapid dilatancy; some very fine to sand, subangular to subround; some clay; little pebbles, angular to subround; trace granules, subround; medium stiff; moist.	very coarse grained small to large	(217.0 - 227.0') Normal drilling	(217.0 - 227.0') No drilling flu used
	s: USCS = L	Inified Soil Cl	assificatior	n Syster	n, ft =	feet, bgs = below ground surface, am	sl = above mean se	a level, NR = I	No Recove
						n, Notes: Solid blue and hollow blue			
		-				red during the first VAS interval, respe			
is.) first en		55 5			ag.	, ,			

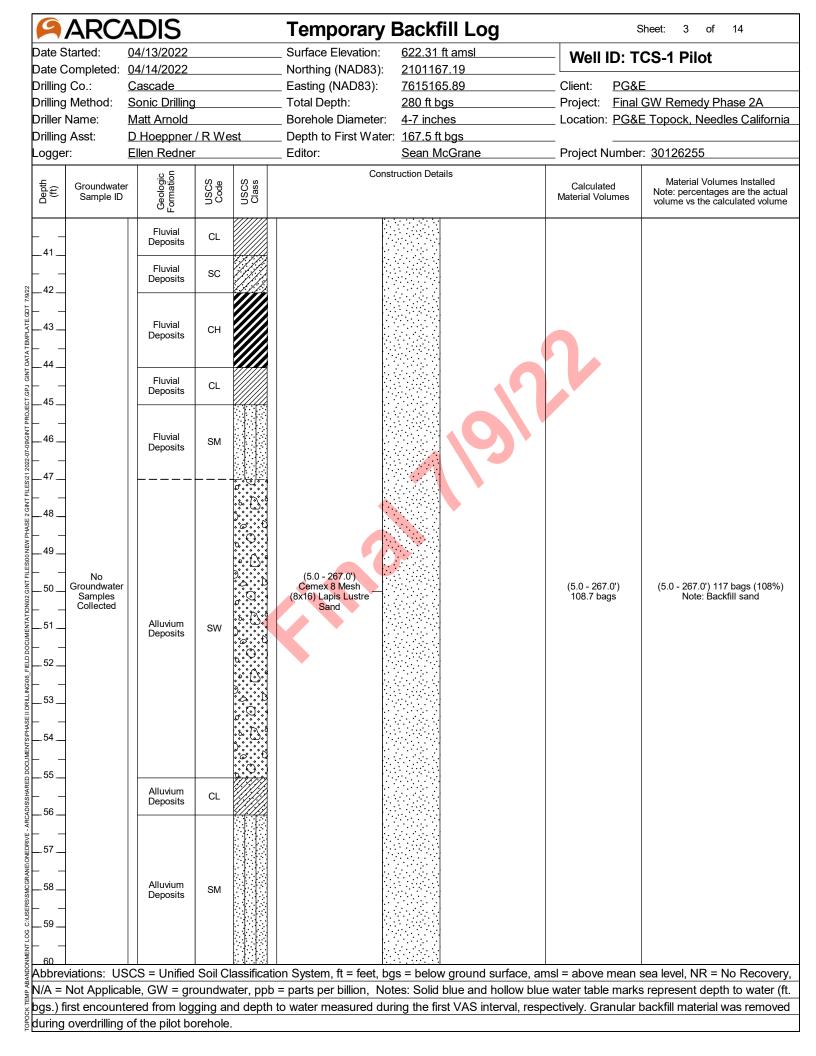
ate Started: ate Completed illing Co.: illing Method: ill Rig Type: iller Name:	<u>03/31/2</u> d: <u>04/13/2</u>	2022				<u> </u>			
illing Co.: illing Method: ill Rig Type:	d: <u>04/13/2</u>			Surface			- Boring No	.: TCS-1 P	ilot
illing Method: ill Rig Type:	~			Northin					
ill Rig Type:	Cascad			-	•		Client: PG&E		
• •		ongyear drill		Total D Borehc	•	280 ft bgs meter: <u>4-7 inches</u>	Project: <u>Final (</u> Location: <u>PG&amp;E</u>	<u>SW Remedy P</u> Topock Neer	
mor ritarrio.	Matt Ar					t Water: 167.5 ft bgs		TOPOCK, Need	
illing Asst:	-	opner / R We		Sampli			Project Number:	30126255	
ogger:	Ellen R	•		Sampli	-			00.20200	
litor:	Sean N	/IcGrane		Conver	•				
Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
221_			Alluvium Deposits	ML		. (220-221 ft) Sandy silt with gravel (ML); re no plasticity, rapid dilatancy; some very fir sand, subangular to subround; little clay; t	e to very coarse grained race granules, angular to		
222 223 - 8.5 224	CS-1-SS- 221-227 1/13/2022 16:03	TCS-1-VAS- 221-226 (<0.025 ppb) 4/5/2022 10:45	Alluvium Deposits	SM		subround; trace small to medium pebbles medium stiff; moist to wet. (221-225 ft) Silty sand with gravel (SM); re very fine to very coarse grained, angular to small to large pebbles, angular to subrour to subround; little clay; wet.	ddish brown (5YR 4/3); subround; little silt; little		
			Alluvium Deposits	SW		(225-225.5 ft) Well grade sand with grave (5YR 4/3); very fine to very coarse grained			
226			<u> </u>			little granules, angular to subround; little s	mall to large pebbles,		
			Alluvium Deposits	SM		angular to subround; trace silt; trace clay; (225.5-227 ft) Silty sand with gravel (SM);			
	CS-1-SS- 227-230 I/14/2022 07:50		Alluvium Deposits	ML		small to large pebbles, angular to subrour to subround; little clay; wet. (227-230 ft) Sandy silt with gravel (ML); da 4/2); low plasticity, rapid dilatancy; little ve grained sand, angular to subround; little s subangular to subround; little clay; trace g subround; medium stiff; moist.	ark reddish gray (5YR ry fine to very coarse mall to medium pebbles,	(227.0 - 230.0') Normal drilling	(227.0 - 230.0') No drilling flu used
2317			Alluvium Deposits	SM		(230-232 ft) Silty sand with gravel (SM); very fine to very coarse grained, subangul little clay; little small to large pebbles, ang granules, angular to subround; moist.	ar to subround; some silt;	(230.0 - 235.0') Hard drilling	(230.0 - 235.0') No drilling flu used
	CS-1-SS- 230-235 1/14/2022 07:55		Alluvium Deposits	ML		(232-234 ft) Sandy silt with gravel (ML); da 4/2); low plasticity, rapid dilatancy; little ve grained sand, angular to subround; little s subangular to subround; little clay; trace g subround; medium stiff; moist.	ry fine to very coarse mall to medium pebbles,		
235			Alluvium Deposits	SM		(234-235 ft) Silty sand with gravel (SM); very fine to very coarse grained, subangul little clay; little small to large pebbles, ang granules, angular to subround; moist.	ar to subround; some silt;		(
236			Alluvium Deposits	ML		(235-237 ft) Gravelly silt with sand (ML); g low plasticity, rapid dilatancy; some clay, l pebbles, angular to subangular; little very grained sand, angular to subround; trace g subangular; medium stiff; moist.	ittle small to medium fine to very coarse	(235.0 - 245.0') Hard drilling	(235.0 - 245.0') No drilling flu used
- 8.7 4 238_ - 239_ -	CS-1-SS- 235-240 1/14/2022 08:00		Alluvium Deposits	ML		(237-245 ft) Sandy silt with gravel (ML); br plasticity, rapid dilatancy; some very fine t sand, angular to subround; little clay, little pebbles, subangular to subround; trace gr subround; medium stiff; moist.	o very coarse grained small to medium		
breviations:	USCS = L	Inified Soil C	lassification	I Svster	<u>n, ft =</u>	feet, bgs = below ground surface,	amsl = above mean s	ea level, NR =	I No Recove
					-	on, Notes: Solid blue and hollow bl			
						ired during the first VAS interval, re			

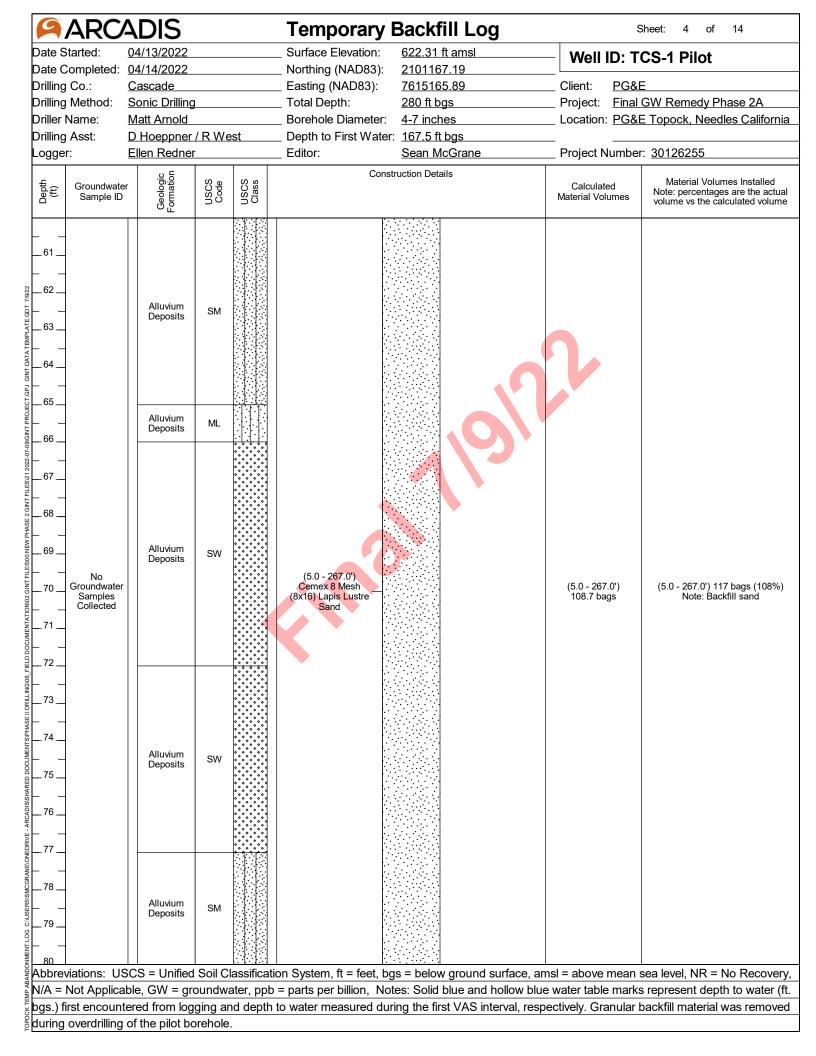
rilling C rilling N rill Rig riller Na rilling A ogger: ditor:	omple Co.: Vletho Type ame: Asst:	ted: 04/1 Case od: Son : Boar Matt D He Eller	c Drilling t Longyear drill Arnold peppner / R We Redner McGrane	head       est	Northir Easting Total D Boreho Depth Sampli	ole Diar	D83): <u>2101167.19</u> 83): <u>7615165.89</u> 280 ft bgs	•	W Remedy Pl	
rilling C rilling M rill Rig riller Na rilling A ogger: ditor:	Co.: Metho Type ame: Asst:	Case od: Soni : Boa Matt D.He Eller Sea	c Drilling t Longyear drill Arnold peppner / R We Redner McGrane	head   est	Easting Total D Boreho Depth Sampli	g (NAD epth: ble Diar to First	83): <u>7615165.89</u> <u>280 ft bgs</u>	Client: <u>PG&amp;E</u> Project: <u>Final G</u>		
rilling N rill Rig riller Na rilling A ogger: ditor:	Metho Type ame: Asst:	od: <u>Son</u> : <u>Boa</u> <u>Matt</u> <u>D Ho</u> <u>Eller</u> <u>Seea</u>	c Drilling t Longyear drill Arnold peppner / R We Redner McGrane	i head i est i	Total D Boreho Depth Sampli	epth: ble Diar to First	280 ft bgs	Project: Final G	W Remedy Pl	nase 2A
rill Rig riller Na rilling A ogger: ditor:	Type ame: Asst:	: <u>Boa</u> l <u>Matt</u> <u>D He</u> <u>Eller</u> <u>Seal</u>	t Longyear drill Arnold peppner / R We Redner McGrane	head     est ; ;	Boreho Depth Sampli	ole Diar to First	0	•	<u>vv Remedy Fi</u>	IASE ZA
riller Na rilling A ogger: ditor:	ame: Asst:	<u>Matt</u> <u>D Ho</u> <u>Eller</u> <u>Sear</u> Sieve	Arnold peppner / R We Redner n McGrane	est	Depth Sampli	to First		Location PG&F	Topock, Need	
rilling A ogger: ditor: tto ditor:	Asst:	<u>Eller</u> <u>Sea</u> <sub>Sieve</sub>	n Redner	est :	Sampli		Water: <u>167.5 ft bgs</u>		<u>100000, 11000</u>	
ditor:		Sieve	n McGrane		Sampli			Project Number:	30126255	
(ft)	Recovery (ft)	Sieve				ng Inte	rval: <u>Continuous</u>	-		
_	Recovery (ft)		Construction to a start of the		Conve	ted to	Well: 🛛 Yes 🗌 No			
241			Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Flui
							(237-245 ft) Sandy silt with gravel (ML); brown plasticity, rapid dilatancy; some very fine to ver sand, angular to subround; little clay; little sma pebbles, subangular to subround; trace granul subround; medium stiff; moist.	y coarse grained		
242 243 244	8.7	TCS-1-SS- 240-245 4/14/2022 08:04		Alluvium Deposits	ML		2			
_ 246 _ 247							(245-251.5 ft) Sandy silt with gravel (ML); redd low plasticity, rapid dilatancy; some very fine to sand, angular to subround; little clay; trace gra subround; trace small to medium pebbles, sub moist.	o very coarse grained inules, angular to	(245.0 - 257.0') Hard drilling	(245.0 - 257.0') No drilling flu used
_ 248_ 249_ 250_ 251_	9	TCS-1-SS- 245-251.5 4/14/2022 08:08		Alluvium Deposits	ML					
_ 252 _ 253				Alluvium Deposits	SM		(251.5-253 ft) Silty sand (SM); reddish brown ( very coarse grained, angular to subround; som granules, angular to subround; trace small to r subangular to subround; dry.	ne silt; little cláy; trace nedium pebbles,		
254		TCS-1-SS- 251.5-257 4/14/2022		Alluvium Deposits	ML		(253-254.5 ft) Gravelly silt with sand (ML); red plasticity, rapid dilatancy; little small to large p subangular; little clay; little very fine to very co angular to subround; trace granules, angular to	ebbles, angular to arse grained sand,		
255		08:13	TCS-1-VAS- 254-259 (<0.13 ppb)	Alluvium Deposits	SM		(254.5-257 ft) Silty sand with gravel (SM); redo very fine to very coarse grained, angular to sub medium pebbles, subangular to subround; little granules, angular to subround; wet.	pround; little small to		
257 258 259 _	3.8	TCS-1-SS- 257-263 4/14/2022 08:18	4/7/2022 11:40	Alluvium Deposits	SM		(257-268.5 ft) Silty sand (SM); reddish brown ( very coarse grained, subangular to subround; trace granules, angular to subangular; trace si pebbles, angular to subangular; moist to wet.	some silt; some clay;	(257.0 - 262.0') Hard drilling	(257.0 - 262.0') No drilling flu used
260	- 4:			  : <b>::</b> ::::::::::::::::::::::::::::::						
						-	feet, bgs = below ground surface, ams n, Notes: Solid blue and hollow blue v			
		•	v				red during the first VAS interval, respe		• • •	

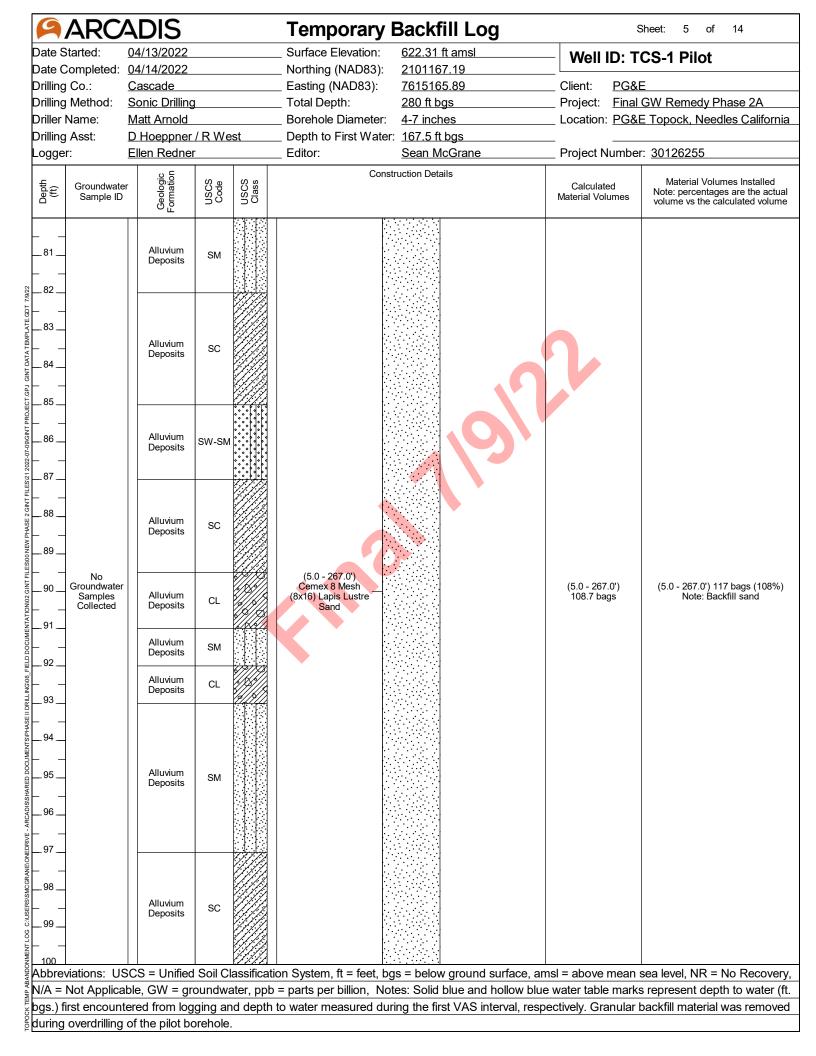
<u>Boart I</u> <u>Matt A</u> <u>D Hoe</u> <u>Ellen F</u>	2022 de Drilling Longyear dril	est	Northin Easting Total I Boreho Depth Sampl Sampl	ole Diar	D83): weter: Water: thod: rval: Well: (257-268 very coar trace gra pebbles,	622.31 ft amsl 2101167.19 7615165.89 280 ft bgs 4-7 inches 167.5 ft bgs 4 inch x 10 ft. Core Barrel Continuous X Yes No Soil Description 15 ft) Silty sand (SM); reddish brow se grained, subangular to subrour nules, angular to subangular; moist to w 15 ft) Wet 5 ft) Wet	Client: PG&I Client: PG&I Project: Final Location: PG&I Project Number Project Number Wn (5YR 4/4); very fine to nd; some silt; some clay; e small to medium	GW Remedy P E Topock, Need r: <u>30126255</u> Drilling Notes	hase 2A Iles Californi Drilling Fluid
Casca Sonic Boart 1 Matt A D Hoe Ellen F Sean I Sieve Imple ID S-1-SS- 4/2022 8:18	de Drilling Longyear dril rnold ppner / R W Redner McGrane Groundwater Sample ID	Il head est est	Easting Total I Boreho Depth Sampl Conve	g (NAD Depth: ole Diar to First ing Met ing Inte	83): meter: Water: thod: erval: Well: (257-268 very coar trace gra pebbles,	7615165.89 280 ft bgs 4-7 inches 167.5 ft bgs 4 inch x 10 ft. Core Barrel Continuous X Yes No Soil Description 5 ft) Silty sand (SM); reddish brow se grained, subangular to subrour nules, angular to subangular; trac angular to subangular; moist to w	Client: PG&I Client: PG&I Project: Final Location: PG&I Project Number Project Number Wn (5YR 4/4); very fine to nd; some silt; some clay; e small to medium	E GW Remedy P E Topock, Need r: <u>30126255</u> Drilling Notes (262.0 - 275.0')	hase 2A Iles Californi Drilling Fluid (262.0 - 275.0') No drilling flui
Sonic Boart I Matt A D Hoe Ellen F Sean I Sieve Imple ID S-1-SS- 7-263 4/2022 8:18	Drilling Longyear dril mold ppner / R W Redner Groundwater Sample ID	Il head est	Total E Boreho Depth Sampl Conve	Depth: ole Diar to First ing Met ing Inte rted to	meter: Water: thod: rval: Well: (257-268 very coar trace gra pebbles,	280 ft bgs 4-7 inches 167.5 ft bgs 4 inch x 10 ft. Core Barrel Continuous ☑ Yes □ No Soil Description 5 ft) Silty sand (SM); reddish brow se grained, subangular to subrour nules, angular to subangular; trac angular to subangular; moist to w	Project: Final Location: PG& Project Number Project Number	GW Remedy P E Topock, Need r: 30126255 Drilling Notes	(262.0 - 275.0') No drilling fluid
Boart   Matt A D Hoe Ellen F Sean I Sieve Imple ID S-1-SS- 7-263 4/2022 8:18	Longyear dril rmold ppner / R W. Redner McGrane Groundwater Sample ID TCS-1-VAS- 266-271 (<0.13 ppb) 4/13/2022	Il head est oodicic Burgeologi	Boreho Depth Sampl Sampl Conve	ole Diar to First ing Met ing Inte rted to	meter: Water: thod: rval: Well: (257-268 very coar trace gra pebbles,	4-7 inches     167.5 ft bgs     4 inch x 10 ft. Core Barrel     Continuous     X Yes    No     Soil Description     Soil Description     Se grained, subangular to subrour nules, angular to subangular; trac angular to subangular; moist to w	Location: <u>PG&amp;I</u> Project Number Wn (5YR 4/4); very fine to nd; some silt; some clay; e small to medium	E Topock, Need	(262.0 - 275.0') No drilling fluic
Matt A D Hoee Ellen F Sean I Sieve Imple ID S-1-SS- 7-263 8:18	rnold ppner / R Wr Redner McGrane Groundwater Sample ID TCS-1-VAS- 266-271 (<0.13 ppb) 4/13/2022	est Geologic Uotmation Alluvium	Depth Sampl Conve	to First ing Met ing Inte rted to	Water: thod: rval: Well: (257-268 very coar trace gra pebbles,	167.5 ft bgs 4 inch x 10 ft. Core Barrel Continuous X Yes No Soil Description 5 ft) Silty sand (SM); reddish brow se grained, subangular to subrou nules, angular to subangular; trac angular to subangular; moist to w	Project Number	r: <u>30126255</u> Drilling Notes	Drilling Fluid (262.0 - 275.0') No drilling flu
D Hoe Ellen F Sean I Sieve Imple ID S-1-SS- 7-263 4/2022 8:18	Pppner / R W Redner McGrane Groundwater Sample ID TCS-1-VAS- 266-271 (<0.13 ppb) 4/13/2022	est Geologic Unmation Alluvium	Sampl Conve	ing Met ing Inte rted to	thod: well: (257-268 very coar trace gra pebbles,	4 inch x 10 ft. Core Barrel Continuous X Yes No Soil Description 5 ft) Silty sand (SM); reddish brow se grained, subangular to subrour nules, angular to subangular; trac angular to subangular; moist to w	wn (5YR 4/4); very fine to nd; some silt; some clay; e small to medium	Drilling Notes	(262.0 - 275.0') No drilling flui
Ellen F Sean I Sieve imple ID S-1-SS- 7-263 4/2022 8:18	Redner         McGrane         Groundwater         Sample ID         TCS-1-VAS- 266-271         (<0.13 ppb)	Lormation -	Sampl Conve	ing Inte	(257-268 very coar trace gra pebbles,	Continuous Yes No Soil Description 5 ft) Silty sand (SM); reddish brow se grained, subangular to subrow nules, angular to subangular; trac angular to subangular; moist to w	wn (5YR 4/4); very fine to nd; some silt; some clay; e small to medium	Drilling Notes	(262.0 - 275.0') No drilling flu
Sean I Sieve Imple ID S-1-SS- 7-263 4/2022 8:18 S-1-SS- 5-268.5 4/2022	CGrane Groundwater Sample ID TCS-1-VAS- 266-271 (<0.13 ppb) 4/13/2022	Louin Alluvium	Conve SUS SUS	rted to	Well: (257-268 very coar trace gra pebbles,	Yes No     Soil Description     Soil Solution     Soil Solution     se grained, subangular to subrour     nules, angular to subangular; trac     angular to subangular; moist to w	nd; some silt; some clay; e small to medium	(262.0 - 275.0')	(262.0 - 275.0') No drilling flu
Sieve imple ID 5-1-SS- 7-263 4/2022 8:18 5-1-SS- 5-268.5 4/2022	Groundwater Sample ID TCS-1-VAS- 266-271 (<0.13 ppb) 4/13/2022	Geologic Formation Alluvium	Code		(257-268 very coar trace gra pebbles,	Soil Description 5 ft) Silty sand (SM); reddish brov se grained, subangular to subrour nules, angular to subangular; trac angular to subangular; moist to w	nd; some silt; some clay; e small to medium	(262.0 - 275.0')	(262.0 - 275.0') No drilling flu
S-1-SS- 7-263 4/2022 8:18 S-1-SS- 5-268.5 4/2022	Sample ID TCS-1-VAS- 266-271 (<0.13 ppb) 4/13/2022	Alluvium		USCS	very coar trace gra pebbles,	5 ft) Silty sand (SM); reddish brov se grained, subangular to subrour nules, angular to subangular; trac angular to subangular; moist to w	nd; some silt; some clay; e small to medium	(262.0 - 275.0')	(262.0 - 275.0') No drilling flui
7-263 4/2022 8:18 5-1-SS- -268.5 4/2022	266-271 (<0.13 ppb) 4/13/2022		SM		very coar trace gra pebbles,	se grained, subangular to subrour nules, angular to subangular; trac angular to subangular; moist to w	nd; some silt; some clay; e small to medium	(262.0 - 275.0')	275.0') No drilling flui
6-1-SS- -268.5 4/2022	266-271 (<0.13 ppb) 4/13/2022		SM		(262-268	.5 ft) Wet		275.0')	275.0') No drilling flu
3-268.5 4/2022	266-271 (<0.13 ppb) 4/13/2022								
	266-271 (<0.13 ppb) 4/13/2022								
	4/13/2022				(268 5 27	73.5 ft) Sedimentary Rock; reddish	hrown (5VP $4/4$ ): find		
	07.70	Weathered Bedrock -		****	grained to weathere	on medium grained, subangular to d; soft; moist.			
		Conglomera		× × × × × × × × × × × × × × × × × × ×		77 ft) Sedimentary Rock; reddish b	prown (5YR 4/4); fine	_	
Sieve mples llected		Competent	t	× × × × × × × × × × × × ×	grained; process;	moderately weathered; soft; friable moist to dry.	e; pulverized by drilling		
	No Groundwater Samples Collected	Bedrock -		× × × × × × × × × × × × × × × × ×		IO I E: Color change to 2.5YR 4/4	- reddish brown.	(275.0 - 280.0') Hard drilling	(275.0 - 280.0') No drilling flu used
		Bedrock -		× × × × × × × × × ×	(277-280 grained to	o medium grained, subangular to	subround; moderately		
				$\times \times \times$					
SCS = I			•			•			
	-	/ater, ppb =	narts r	oer billic	on, Notes			represent dept	
able, GV									e can ha th
	SCS = I ble, GV	No Groundwater Samples Collected	Imples       No       Competent         Groundwater       Bedrock -         Samples       Collected       Conglomera         Collected       Competent       Bedrock -         Conglomera       Competent       Bedrock -         Conglomera       Competent       Bedrock -         Conglomera       Competent       Bedrock -         Conglomera       Conglomera       Conglomera         SCS = Unified Soil Classification       Competent       Competent	Imples       No         Groundwater       Competent         Samples       Conglomerate         Collected       Competent         Bedrock -       Conglomerate         Competent       Competent         Bedrock -       Conglomerate         Competent       Bedrock -         Competent       Competent         Bedrock -       Competent         Bedrock -       Competent         Bedrock -       Conglomerate         SCS = Unified Soil Classification System	Sected No Groundwater Samples Collected Competent Bedrock Conglomerate Conglomerate Conglomerate Conglomerate Competent Bedrock X × × X ×	Sected No Groundwater Samples Collected Competent Competent Bedrock - Conglomerate Conglomerate Conglomerate Competent Samples Collected Competent Samples Collected Competent Samples Conglomerate Conglomerate Competent Samples Competent Samples Conglomerate Competent Samples Competent Samples Sector Samples Competent Samples Competent Samples Competent Samples Competent Samples Competent Samples Competent Samples Competent Samples Samples Competent Samples Samples Competent Samples Competent Samp	Sected No Groundwater Samples Collected Competent Samples Collected Competent Comp	Sieve apples sected No Groundwater Samples Collected Competent Bedrock - Conglomerate Conglomerate Conglomera	Sieve opples sected       No       Competent Bedrock - Conglomerate       Somples collected       Competent Bedrock - Conglomerate       Somples collected       Competent Samples collected       Somples collected       Competent Samples collected       Somples collected       Competent Some collected       Somples collected       Somples collected       Competent Samples Collected       C

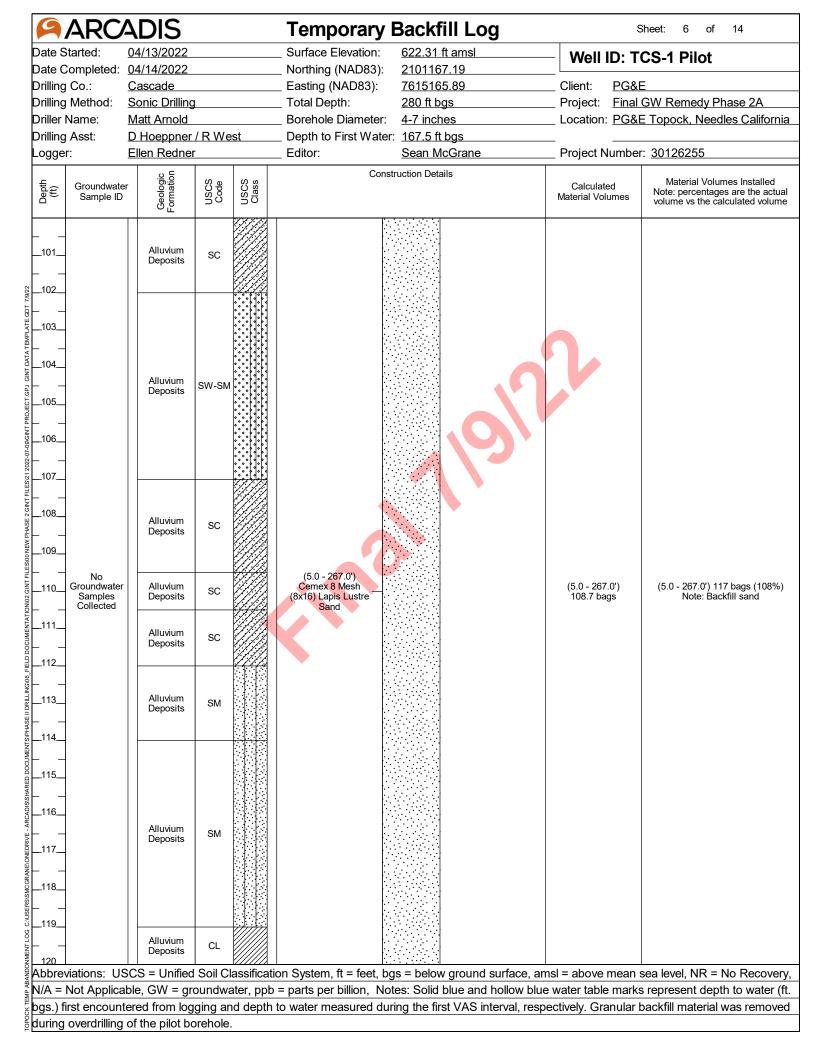
9	ARC	ADIS			Temporary	/ Backfi	ll Log	:	Sheet: 1 of 14	
Date S	tarted:	04/13/2022			Surface Elevation:			- Well ID: T	CS-1 Pilot	
Date C Drilling	•	04/14/2022 Cascade			_ Northing (NAD83) _ Easting (NAD83):	: <u>2101167</u> 7615165		L Client: <u>PG&amp;</u>		
-	Method:	Sonic Drilling			_ Total Depth:	<u>280 ft bg</u>			GW Remedy Phase 2A	
Driller N		Matt Arnold			Borehole Diamete	•		Location: PG&E Topock, Needles California		
Drilling		<u>D Hoeppner</u>		est	_ Depth to First Wat		-			
Logger		Ellen Redner	•		_ Editor:	<u>Sean Mc</u>		Project Numbe	r: <u>30126255</u>	
Depth (ft)	Groundwate Sample ID		USCS Code	USCS Class		nstruction Detail		Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume	
		Fill	N/A		(0.0 - 0.5') Steel plate		0.0 - 38.0') 7" Diameter Borehole		Note: Steel plate used to mark pilot borehole	
DATA TEMPLATE.GDT 7/9/22		Fill	N/A		(0.5 - 4.0') Cemex #60 (40x70) — Lapis Lustre Sand			(0.5 - 4.0') 2.1 bags	(0.5 - 4.0') 3 bags (143%) Note: Surface sand seal, used >20% of the calculated volume due to potential voids that formed during drilling.	
					(4.0 - 5.0') Cemex #3 (8x20) — Lapis Lustre Sand	**************************************		(4.0 - 5.0') 0.5 bags	(4.0 - 5.0') 0.5 bags (100%) Note: Surface sand seal	
00 NEW PHARE 2 GINT FILES/21 2022-07-09/GINT PRO.		Fluvial Deposits	SM				0			
L LIFES	No									
01	Groundwater Samples Collected	Fluvial Deposits	SW							
		Fluvial Deposits	SP		(5.0 - 267.0') Cemex 8 Mesh (8x16) Lapis Lustre Sand			(5.0 - 267.0') 108.7 bags	(5.0 - 267.0') 117 bags (108%) Note: Backfill sand	
015		Fluvial Deposits	SW							
HSISIDE										
16 16 17 17 17 17 17 17 17 17 17 17 19 17 19		Fluvial Deposits	SW							
20										
<u></u>									sea level, NR = No Recovery,	
S									s represent depth to water (ft. backfill material was removed	
ý <u>-</u> ,		of the pilot bo								
- J		•								







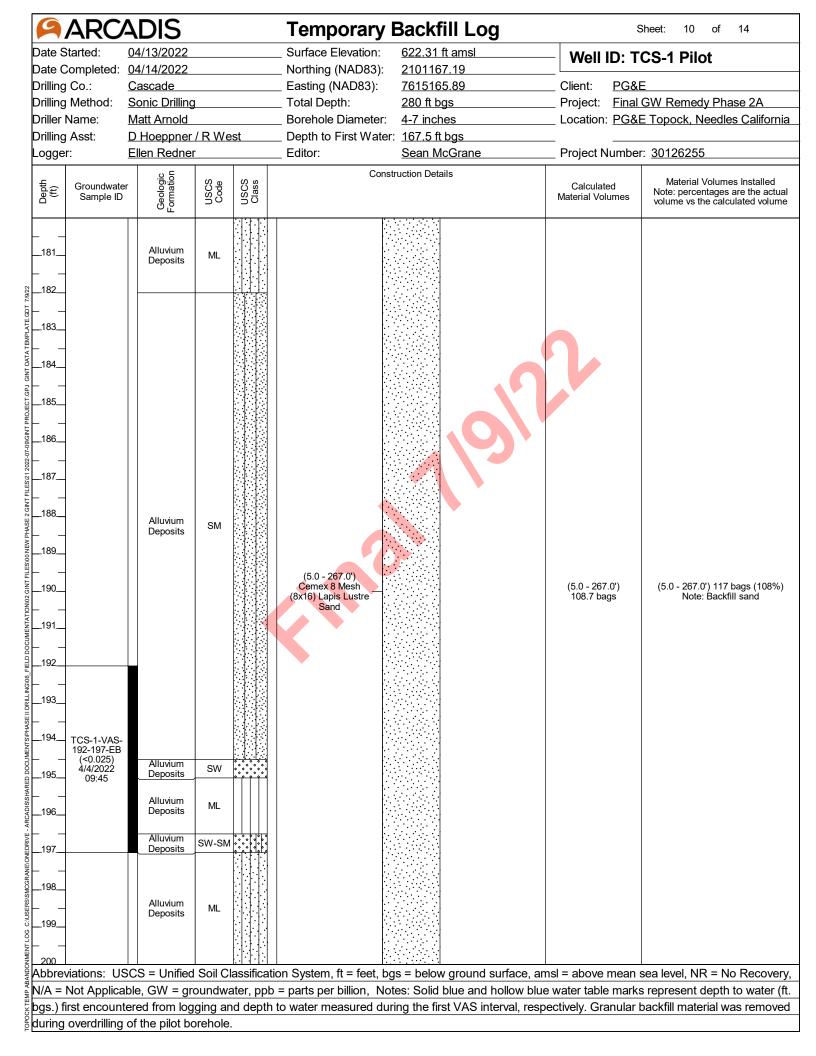




125         126         127         127         128         129         129         130         Groundwater Samples Collected         Samples Collected         Ollected         130         Groundwater Samples Collected         Samples Collected         130	ARC	ADIS			Temporary I	Backfill Log	S	Sheet: 7 of 14
Date Complete: 04/14/2022 Northing (NADB3): 2101167.19 Diffing Co:: Cascade Easting (NADB3): 2101167.19 Diffing Ast: Cascade Easting (NADB3): 2101167.19 Diffing Ast: Diffing And Amold Borehold Dander 4 // Tables Location DEAE Topock, Reedies California Depth to First Water. 167.615.69 Diffing Ast: Diffing And Amold Borehold Dander 4 // Tables Location DEAE Topock, Reedies California Depth to First Water. 167.615.69 Depth to First Water. 167.615.615.615.69 Depth to First Water. 167.615.615.615.615.615.615.615.615.615.615	Date Started:	04/13/2022					Well ID: T	CS-1 Pilot
Dulling Method: Sonie Delling Total Dept: 280 fbgs. Project: Ena GKV feese 2A. Delogance / R West. Delogance / R West. Dooph to Fist Water. 167 fb fbgs. Logance / R West. Dooph to Fist Water. 167 fb fbgs. Dooph to Fist Water. 167 fb								
Driffer Name:         Matt Arnel / Desponse         Borehole Diameter         4.7 Entes         Location: EQ&E Topock, Needles California           Orger         Ellen Rechaer         Editor:         Sean MsGrane         Project Number: 30128255           Seg concretents         Big concretents         Editor:         Sean MsGrane         Project Number: 30128255           Seg concretents         Big concretents         Editor:         Construction Dealitie         Octivation Dealitie         More Proceedings of the concretents of the concretent of the concretents of the concretents of the concretent of the conc	-		3		,			
Logger         Ellen Redrer         Editor:         Sam McGrane         Project Number: 30120255 <u>8</u> © Gruntwater <u>8</u> @ <u>8</u> @ <u>9</u> @	-	-	9				•	•
$\frac{1}{6} \in Countration Britishow (Countration Details (Countration Countration Details (Countration Details (Coun$	Drilling Asst:			st		-		
122     Allowing     SM       122     Allowing     SM       124     Allowing     SM       124     Allowing     M.       125     Allowing     M.       126     Allowing     M.       127     Allowing     M.       128     Allowing     M.       129     Allowing     M.       120     Allowing     M.       128     Allowing     M.       129     Allowing     M.       120     Allowing     M.       121     Allowing     M.       122     Allowing     M.       128     Allowing     SM       131     Allowing     SM       132     Allowing     SM       133     Allowing     SM       134     Allowing     SM       135     Allowing     SM       136     Allowing     SM       137     Allowing     SM       138     Allowing     SM       139     Allowing     SM <td< td=""><td>Logger:</td><td></td><td>r</td><td></td><td></td><td></td><td> Project Number</td><td>: <u>30126255</u></td></td<>	Logger:		r				Project Number	: <u>30126255</u>
122       Abroken       5M         123       Abroken       5M         124       Abroken       Mainten         125       Abroken       Mainten         126       Abroken       Mainten         127       Abroken       Mainten         128       Abroken       Mainten         129       Oscientistic       Mainten         120       Oscientistic       Mainten         121       Abroken       Mainten         122       Oscientistic       Mainten         131       Abroken       State         132       Abroken       State         133       Abroken       State         134       Abroken       State         135       Abroken       State         136       Abroken       State         137       Abroken       State         138       Abroken       State         139       Abroken       State         134       Abroken       State         135       Abroken       State         136       Abroken       State         137       Abroken       State         138       A	Groundwat G Sample I	Geologic Formation	USCS Code	USCS Class	Const	ruction Details		Note: percentages are the actual
127       128         128       Alluxium         130       Groundwater Samples         131       Alluxium         132       Groundwater Samples         133       Alluxium         134       Alluxium         138       Alluxium         139       Alluxium         139       Alluxium         139       Alluxium         139       Alluxium         139       Alluxium         130       Alluxium         131       Beposits         132       Alluxium         134       Alluxium         138       Alluxium         139       Alluxium         130       Alluxium         131       Beposits         132       Alluxium         133       Alluxium         134	     		SM					
130       Alluvium Groundwater Samples Collected       ML       (5.0 - 267.0°) (0.0 - 267.0°)       (5.0 - 267.0°) 108.7 bags       (5.0 - 267.0°) 108.7 bags         131       Alluvium Deposits       SM       (5.0 - 267.0°)       (5.0 - 267.0°)       (5.0 - 267.0°)         132       Alluvium Deposits       SM       (5.0 - 267.0°)       (5.0 - 267.0°)       (5.0 - 267.0°)         133       Alluvium Deposits       SM       (5.0 - 267.0°)       (5.0 - 267.0°)       (5.0 - 267.0°)         134       Alluvium Deposits       SM       (5.0 - 267.0°)       (5.0 - 267.0°)       (5.0 - 267.0°)         134       Alluvium Deposits       SM       (5.0 - 267.0°)       (5.0 - 267.0°)       (5.0 - 267.0°)         134       Alluvium Deposits       SM       (5.0 - 267.0°)       (5.0 - 267.0°)       (5.0 - 267.0°)         134       Alluvium Deposits       SM       (5.0 - 267.0°)       (5.0 - 267.0°)       (5.0 - 267.0°)         134       Alluvium Deposits       SM       (5.0 - 267.0°)       (5.0 - 267.0°)       (5.0 - 267.0°)         135       Alluvium Deposits       SM       (5.0 - 267.0°)       (5.0 - 267.0°)       (5.0 - 267.0°)         136       Alluvium Deposits       SM       (5.0 - 267.0°)       (5.0 - 267.0°)       (5.0 - 267.0°) <tr< td=""><td></td><td></td><td>ML</td><td></td><td></td><td></td><td></td><td></td></tr<>			ML					
Samples Collected       Image: Samples Collected       108.7 bags       Note: Backfill sand         131       Alluvium Deposits       SM       Image: Samples Sand       108.7 bags       Note: Backfill sand         132       Image: Samples Sand       Image: Samples Samples       Image: Samples Samples       Image: Samples       Image: Sampl	 129 No	Deposits	ML				(5.0 - 267.0')	(5.0 - 267.0') 117 bags (108%)
Alluvium Deposits SW-SC Alluvium Deposits SM Alluvium Deposits Alluvium Depos	Samples Collected	Alluvium	SM		(8x16) Lapis Lustre		`108.7 bags´	Note: Backfill sand
Alluvium Deposits SM -136 -137 -138 -138 -138 -139 -140 Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Recovery, N/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks represent depth to water (ft. bgs.) first encountered from logging and depth to water measured during the first VAS interval, respectively. Granular backfill material was removed	 133  134 		sw-sc					
Alluvium Deposits SM Alluvium Deposits SM Alluvium Alluvium Deposits SM Alluvium Alluvium Alluvium Alluvium Deposits SM Alluvium Alluvium Alluvium Deposits SM Alluvium	 136 		SM					
Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Recovery, N/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks represent depth to water (ft. bgs.) first encountered from logging and depth to water measured during the first VAS interval, respectively. Granular backfill material was removed	 139 		SM					
bgs.) first encountered from logging and depth to water measured during the first VAS interval, respectively. Granular backfill material was removed								
		-						· · · ·
					to water measured dur	ing the first VAS interval, r	espectively. Granular l	backtill material was removed

ARC	ADIS			Temporary I	Backfill Log	S	Sheet: 8 of 14
Date Started: Date Completed: Drilling Co.: Drilling Method: Driller Name: Drilling Asst: Logger:	04/13/2022 04/14/2022 Cascade Sonic Drilling Matt Arnold D Hoeppner Ellen Redner	/ R We	est	Surface Elevation:622.31 ft amslNorthing (NAD83):2101167.19Easting (NAD83):7615165.89Total Depth:280 ft bgsBorehole Diameter:4-7 inchesDepth to First Water:167.5 ft bgsEditor:Sean McGrane		•	E GW Remedy Phase 2A E Topock, Needles California
Groundwate Groundwate Sample ID	logic ation	USCS Code	USCS Class		ruction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
	Alluvium Deposits	SM					
ILL	Alluvium Deposits	SM		(5.0 - 267.0') Cemex 8 Mesh (8x16) Lapis Lustre Sand		(5.0 - 267.0') 108.7 bags	(5.0 - 267.0') 117 bags (108%) Note: Backfill sand
미크는 152 ᅇ	Alluvium Deposits	ML					
011112011353153 153154	Alluvium Deposits	SM					
ПООД GLUWHSSIGVUL	Alluvium Deposits	SM					
Abbreviations: U							sea level, NR = No Recovery,
6	-						s represent depth to water (ft. backfill material was removed
	of the pilot bo	orehole					

9	ARC	ADIS			Temporary I	Backfill Log	S	Sheet: 9 of 14
	Started:	04/13/2022			_ Surface Elevation:	622.31 ft amsl	Well ID: T	CS-1 Pilot
Date 0	Completed:	04/14/2022			_ Northing (NAD83):	2101167.19		
Drilling	g Co.:	Cascade			_ Easting (NAD83):	7615165.89	Client: PG&	
Drilling	g Method:	Sonic Drilling	J		_ Total Depth:	<u>280 ft bgs</u>	Project: <u>Final</u>	GW Remedy Phase 2A
	Name:	Matt Arnold			_ Borehole Diameter:	4-7 inches	Location: <u>PG&amp;</u>	E Topock, Needles California
Drilling	•	D Hoeppner		est	Depth to First Water:	-		
Logge	er:	Ellen Redner	r 		_ Editor:	Sean McGrane	Project Number	: <u>30126255</u>
Depth (ft)	Groundwate Sample ID		USCS Code	USCS Class	CONSU		Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
161 162 162 163 163	No Groundwater Samples Collected	Alluvium Deposits	SM				0.	
LIGT CBP1 GINT		Alluvium Deposits	SM					
0166	TCS-1-VAS-	Alluvium Deposits	SM					
2022-07-0	164-169 (1100) 4/3/2022	Alluvium Deposits	SM					
167	10:50	Alluvium	SM					
	-	Deposits						
Circle 100	-	Alluvium Deposits	SM		(5.0 - 267.0') Cemex 8 Mesh		(5.0 - 267.0')	(5.0 - 267.0') 117 bags (108%)
		Alluvium Deposits	ML		(8x16) Lapis Lustre		108.7 bags	Note: Backfill sand
		Alluvium Deposits	ML					
Abbre								sea level, NR = No Recovery,
<sup>₩</sup> N/A =	Not Applica	ble, GW = gr	oundwa	ater, ppb	= parts per billion, Not	es: Solid blue and hollow blu	ue water table marks	s represent depth to water (ft.
<u> </u>					to water measured dur	ng the first VAS interval, res	pectively. Granular l	backfill material was removed
pauring	overdrilling	of the pilot bo	orenole	•				



Driller Name:       Matt Arnold       Borehole Diameter:       4-7 inches       Location:       PG&E Topo         Drilling Asst:       D. Hoeppner / R. West       Depth to First Water:       167.5 ft bgs       Project Number:       3012         Image: Sample ID	11 of 14
Date Completed:       04/14/2022       Northing (NAD83):       2101167.19         Drilling Co.:       Cascade       Easting (NAD83):       7615165.89       Client:       Project:       Einal GW Rt         Driller Name:       Matt Arnold       Borehole Diameter:       4-7 inches       Location:       PG&E         Drilling Asst:       D Hoeppner/R West       Depth to First Water:       167.5 ft bgs       Location:       PG&E         Logger:       Ellen Redner       Editor:       Sean McGrane       Project Number:       3012	1 Pilot
Drilling Method:       Sonic Drilling       Total Depth:       280 ft bgs       Project:       Final GW Red         Drilling Asst:       D Hoeppner / R West       Borehole Diameter:       47 inches       Location:       PG&E Topo         Logger:       Ellen Redner       Borehole Diameter:       167.5 ft bgs       Project Number: 3012	
Driller Name:       Matt Arnold       Borehole Diameter:       4-7 inches       Location: PG&E Topo         Drilling Asst:       D Hoeppner / R West       Depth to First Water:       167.5 ft bgs       Project Number:       3012 <u>6</u> <u>6</u> <u>6</u> <u>6</u> <u>6</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u> <u>7</u>	Remedy Phase 2A
Logger:       Ellen Redner       Editor:       Sean McGrane       Project Number: 3012	ock, Needles California
Image: Sample ID     Image: Sample ID <td></td>	
201_         ML         ML           202_         Alluvium         ML         Alluvium           203_         Alluvium         ML         Alluvium           203_         Alluvium         ML         Alluvium           204_         Alluvium         ML         Alluvium           205_         Alluvium         ML         Alluvium           206_         Alluvium         ML         Alluvium           207_         Alluvium         ML         Alluvium           208_         Alluvium         ML         Alluvium           209_         (5.0 - 267.0)         (5.0 - 267.0)         (5.0 - 267.0)           209_         (5.0 - 267.0)         (5.0 - 267.0)         (5.0 - 267.0)           210_         (5.0 - 267.0)         (5.0 - 267.0)         (5.0 - 267.0)	26255
201     Alluvium     ML       202     Alluvium     ML       203     Alluvium     ML       204     Alluvium     ML       205     Alluvium     ML       206     Alluvium     ML       207     Alluvium     ML       208     Alluvium     ML       209     Alluvium     ML       200     Alluvium     ML       201     Alluvium     ML       202     Alluvium     ML       203     Alluvium     ML       204     Constant     G.0 - 267.0)       205     G.0 - 267.0)     (5.0 - 267.0)       209     G.0 - 267.0)     (5.0 - 267.0)       209     G.0 - 267.0)     (5.0 - 267.0)	Material Volumes Installed e: percentages are the actual ime vs the calculated volume
202     203     Alluvium     ML       203     204     Alluvium     ML       204     205     Alluvium     ML       205     205     Alluvium     ML       206     Alluvium     ML       207     Alluvium     ML       208     Alluvium     ML       209     209     (5.0 - 267.0')       209     209     (5.0 - 267.0')       209     210     (5.0 - 267.0')       210     (5.0 - 267.0')     (5.0 - 267.0')	
203 204 204 205 205 205 206 206 207 208 208 208 208 208 208 209 208 208 208 208 208 208 (5.0 - 267.0) (5.0 - 267.0) (	
207_ 208_ 209_ 209_ 210_ 210_ 210_ 210_ 210_ 210_ 210_ 210	
209 209 	
Alluvium Deposits ML 211_ 212_ 213_ 214_ 21	0 - 267.0') 117 bags (108%) Note: Backfill sand
Alluvium Deposits SM	
218_ 219_ 220_ Alluvium Deposits ML	
Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea lev	
N/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks represed by both to water measured during the first VAS interval, respectively. Granular backfill	
during overdrilling of the pilot borehole.	in material was removed

9	ARC				Temporary I	Backfill Log		Sheet: 12 of 14
	Started:	04/13/2022			_ Surface Elevation:	622.31 ft amsl		CS-1 Pilot
Date C	Completed:	04/14/2022			Northing (NAD83):	2101167.19		
Drilling	Co.:	Cascade			_ Easting (NAD83):	7615165.89	Client: <u>PG&amp;</u>	E
Drilling	Method:	Sonic Drilling			_ Total Depth:	<u>280 ft bgs</u>	Project: <u>Final</u>	GW Remedy Phase 2A
Driller	Name:	Matt Arnold			_ Borehole Diameter:	4-7 inches	Location: <u>PG&amp;</u>	E Topock, Needles California
Drilling	Asst:	<u>D Hoeppner</u>		st	_ Depth to First Water:			
Logge	r:	Ellen Redner			_ Editor:	Sean McGrane	Project Numbe	er: <u>30126255</u>
Depth (ft)	Groundwate Sample ID		USCS Code	USCS Class	Const	ruction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
		Alluvium Deposits	ML					
BEJ CINT DATA TEMPLATE COT 7/9/22           252           253           254           254           254	TCS-1-VAS- 221-226 (<0.025) 4/5/2022 10:45	Alluvium Deposits	SM					
225		Alluvium Deposits	SW					
1 LUD 226								
22-07-09		Alluvium Deposits	SM					
L 222 223		Alluvium Deposits	ML		(5.0 - 267.0') Cemex 8 Mesh		(5.0 - 267.0') 108.7 bags	(5.0 - 267.0') 117 bags (108%) Note: Backfill sand
LIELD DOCUMENTATION(0) 		Alluvium Deposits	SM		(8x16) Lapis Lustre Sand		100.7 bags	Note: Daokin seru
233 233 234		Alluvium Deposits	ML					
		Alluvium Deposits	SM					
ерике - Часторосливил 235235 236236 236237		Alluvium Deposits	ML					
NUCLES 238 238 238 238 238 238 238 238 238 238		Alluvium Deposits	ML					
Abbrev								sea level, NR = No Recovery,
								s represent depth to water (ft.
Ų ŢŢ					to water measured duri	ng the first VAS interval,	respectively. Granular	backfill material was removed
pauring	overarilling	of the pilot bo	prenole.					

	ARC	ADIS			Temporary B	Backfill Log	s	Sheet: 13 of 14
Date S		04/13/2022			_ Surface Elevation:	622.31 ft amsl	Well ID: T	CS-1 Pilot
	-	<u>04/14/2022</u>			_ Northing (NAD83):	2101167.19		
Drilling	Co.: Method:	Cascade Sonic Drilling			_ Easting (NAD83): _ Total Depth:	7615165.89 280 ft bgs	Client: <u>PG&amp;B</u> Project: <u>Final</u>	= GW Remedy Phase 2A
Driller I		Matt Arnold	j		_ Borehole Diameter:	4-7 inches	•	E Topock, Needles California
Drilling		D Hoeppner	/RWe	est	_ Depth to First Water:		2000.00000 <u></u>	
Logger		Ellen Redner			_ Editor:	Sean McGrane	Project Number	: <u>30126255</u>
Depth (ft)	Groundwate Sample ID	Geologic Formation	USCS Code	USCS Class	Constr	uction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
241 242 243 244 244 2445		Alluvium Deposits	ML					
 246       		Alluvium Deposits	ML		(5.0 - 267.0') Cemex 8 Mesh (8x16) Lapis Lustre Sand		(5.0 - 267.0') 108.7 bags	(5.0 - 267.0') 117 bags (108%) Note: Backfill sand
		Alluvium Deposits	SM					
254		Alluvium Deposits	ML					
255 256 257	TCS-1-VAS- 254-259 (<0.13) 4/7/2022 11:40	Alluvium Deposits	SM					
258		Alluvium Deposits	SM					
Abbrev								sea level, NR = No Recovery,
								s represent depth to water (ft.
					to water measured duri	ng the first VAS interval, r	espectively. Granular t	backfill material was removed
during	overdrilling	of the pilot bo	orehole.					

	ADIS			Temporary I	Backfill Log	S	Sheet: 14 of 14	
Date Started:	04/13/2022			_ Surface Elevation:	622.31 ft amsl	Well ID: T	CS-1 Pilot	
Date Completed: Drilling Co.:	<u>04/14/2022</u> Cascade			_ Northing (NAD83): _ Easting (NAD83):	2101167.19 7615165.89	L Client: <u>PG&amp;I</u>		
Drilling Method:	Sonic Drilling			_ Total Depth:	<u>280 ft bgs</u>	Project: Final GW Remedy Phase 2A		
Driller Name:	Matt Arnold			_ Borehole Diameter:	4-7 inches	Location: PG&E Topock, Needles California		
Drilling Asst:	<u>D Hoeppner</u>		st	_ Depth to First Water:	•			
Logger:	Ellen Redner			_ Editor:	Sean McGrane	Project Number	: <u>30126255</u>	
Groundwat		USCS Code	USCS Class	Const	ruction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume	
 261  262_  263_  263_  264  265  266	Alluvium Deposits	SM		(5.0 - 267.0') Cemex 8 Mesh (8x16) Lapis Lustre Sand		(5.0 - 267.0') 108.7 bags	(5.0 - 267.0') 117 bags (108%) Note: Backfill sand	
267 268 TCS-1-VAS 266-271-EB (<0.13) 4/13/2022 09:20  270  271      				(267.0 - 277.0') Cemex #3 (8x20) Lapis Lustre Sand		(267.0 - 277.0') 2.1 bags	(267.0 - 277.0') 3 bags (143%) Note: Indicator sand, used >20% of the calculated volume due to potential voids that formed during	
	Competent Bedrock - Conglomerate		× × × × × × × × × × × × × × × × × × ×				drilling.	
_277 278 279 279 280	Competent Bedrock - Conglomerate		(x)         x × × × × × × × × × × × × × × × × × × ×	(277.0 - 280.0') Formation Collapse/Settling of Mateial in the Casing				
							sea level, NR = No Recovery,	
v/A = Not Applic	÷			<u> </u>			s represent depth to water (ft.	
· · · · · ·		und an	id depth	to water measured dur	ing the first VAS interval, re	spectively, Granular b	backfill material was removed	

ARC	ADIS			Well Const	ruction Log	ç	Sheet: 1 of 15
Date Started:	06/24/2022			_Surface Elevation:	622.31 ft amsl	Well ID: TC	:S-1
Date Completed:				Shallow Well Elevation			
Drilling Co.:	Cascade			_Deep Well Elevation:	<u>N/A</u>	Client: PG&E	
Orilling Method: Oriller Name:	Dual Rotary J Saldana / A	Lomon		_Northing (NAD83):	2101167.19 7615165.89	•	<u>GW Remedy Phase 2A E Topock, Needles Californ</u>
Drilling Asst:	<u>A Amezquita</u>		าล	_Easting (NAD83): Borehole Diameter:	<u>15.5-18 inches</u>	Location. <u>PG&amp;E</u>	<u>- Topock, Needles Californi</u>
.ogger:	Ellen Redner			Static Water Level:	See Log for Depths	Project Numbe	r: 30126255
Editor:	Sean McGrar			_ _Development End Date	•	,	
otal Depth:	280.2 ft bgs	<del></del>		_Well Completion:		To Be Completed	in Well Vault
Groundwat		USCS Code	USCS Class	Constr	uction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volume
 _ 1	Fill	N/A					
	Fill	N/A		(0.0 - 4.0') Well Vault (3.5 - 170.4')	(0.0 - 131.0')		Note: Well vault dimensions 4x feet by 4 feet deep.
	Fluvial Deposits	SM		10" SHUR-GRIP SDR17 PVC Casing	18" Diameter Borehole		(4.0 - 14.8') 143 gallons (157% Note: Grout seal fourth lift, used >20% of the calculated volume d
_ 9		- NR		(4.0 - 14.8') Portland Cement		(4.0 - 14.8')	to potential grout migration and voids forming during drilling.
No _10 Groundwate	r Fluvial	SW •		Grout with up to 6% bentonite hydrogel		91.3 gallons	Added 2 bags of bentonite chip (Holeplug 3/8", 50 lb. bags eacl
Samples Collected	Deposits	300 *	<u>.</u>				at 8.9 ft. bgs to fill potential void Bentonite chips brought materia
_11 _12 _13 _13 _14 _15	Fluvial Deposits	SP		5			up to 7.9 ft. bgs.
15	Fluvial Deposits	SW 4					
16 17 17 18 19	Fluvial Deposits	SW .		(14.8 - 92.7') Portland Cement Grout with up to 6% bentonite hydrogel		(14.8 - 92.7') 658.7 gallons	(14.8 - 92.7') 741.5 gallons (113 Note: Grout seal third lift
	 SCS = Unifier	🛛 🗯	ssificat	ion System, ft = feet, bay	s = below ground surface, a	 msl = above mean	sea level, SS = Stainless
					pb = parts per billion, Notes		
			-		test from the upper and low		

ARC	ADIS		Well Const	ruction Log	:	Sheet: 2 of 15
Date Started:	06/24/2022		Surface Elevation:	622.31 ft amsl	Well ID: TO	S-1
Date Completed:			Shallow Well Elevation:			
Drilling Co.:	Cascade		Deep Well Elevation:	N/A	Client: PG&	
•	Dual Rotary		Northing (NAD83):	2101167.19	-	GW Remedy Phase 2A
	<u>J Saldana / A</u>		Easting (NAD83):	7615165.89	Location: PG&	<u>E Topock, Needles Californi</u>
-	<u>A Amezquita</u>		Borehole Diameter:	15.5-18 inches		
_ogger:	Ellen Redner		Static Water Level:	See Log for Depths	Project Numbe	r: <u>30126255</u>
Editor:	Sean McGrar	ne	Development End Date:			
Fotal Depth:	280.2 ft bgs		Well Completion:	Flush Stick-up	X To Be Completed	
Groundwat Ge Sample ID		USCS Code USCS Code Class	Constru		Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volume
21 22 22 23	Fluvial Deposits	SW	(3.5 - 170.4') 10" SHUR-GRIP SDR17 PVC Casing		2	
	Fluvial Deposits	SM				n.v
24 25						
26	Fluvial Deposits	SW-SM			NO	
27						
28					<b>Y</b>	
29 No			(14.8 - 92.7')			
30 Groundwate Samples Collected 31	r	NR	Portland Cement Grout with up to 6% bentonite hydrogel		(14.8 - 92.7') 658.7 gallons	(14.8 - 92.7') 741.5 gallons (1139 Note: Grout seal third lift
 33						
_ 34						
		topp				
_35						
36						
_37						
	Fluvial Deposits	SM				
38						
_ 39						
40						
			ation System, ft = feet, bgs			
	-			· · · · · · · · · · · · · · · · · · ·		llow blue water table marks
epresent depth t	o water (π. bg	s.) collected d	uring the specific capacity	lest from the upper and l	ower screen intervals	, respectively.

te Completed: <u>07</u> Iling Co.: <u>Ca</u> Iling Method: <u>Di</u> Iler Name: <u>J</u> Iling Asst: <u>A</u> gger: <u>El</u> itor: <u>Se</u>	6/24/2022	/ D Aldona	Surface Elevation: Shallow Well Elevation Deep Well Elevation: Northing (NAD83): Easting (NAD83): Borehole Diameter: Static Water Level: Development End Dat Well Completion: Const	N/A           2101167.19           7615165.89           15.5-18 inches           See Log for Depths           e: 8/24/2022	•	<u>=</u> GW Remedy Phase 2A = Topock, Needles California r: 30126255
lling Co.: <u>Ca</u> lling Method: <u>Du</u> ller Name: <u>J</u> lling Asst: <u>A</u> gger: <u>El</u> itor: <u>Sample ID</u>	ascade ual Rotary Saldana / A Amezquita llen Redner ean McGran 80.2 ft bgs Solution Fluvial Deposits Fluvial Deposits Fluvial Deposits Fluvial Deposits Fluvial Deposits	/ D Aldona ne System System CL CL CH CL CL	Deep Well Elevation: Northing (NAD83): Easting (NAD83): Borehole Diameter: Static Water Level: Development End Dat Well Completion: Const (3.5 - 170.4') 10" SHUR-GRIP	N/A         2101167.19         7615165.89         15.5-18 inches         See Log for Depths         e:       8/24/2022         □       Flush □       Stick-up ×	Client: PG&E Client: PG&E Project: Final 4 Location: PG&E Project Number To Be Completed Calculated	GW Remedy Phase 2A Topock, Needles Californi r: 30126255 in Well Vault Material Volumes Installed Note: percentages are the actua
lling Method: Di ller Name: J.: lling Asst: A. gger: El itor: Set tal Depth: 28 € Groundwater Sample ID - - - - - - - - - - - - -	ual Rotary Saldana / A Amezquita llen Redner ean McGran 80.2 ft bgs State Stat	/ D Aldona ne System System CL CL CH CL CL	Northing (NAD83): Easting (NAD83): Borehole Diameter: Static Water Level: Development End Dat Well Completion: Const	2101167.19         7615165.89         15.5-18 inches         See Log for Depths         e:       8/24/2022         □       Flush □       Stick-up ×	Project: Final ( Location: PG&E Project Number To Be Completed	GW Remedy Phase 2A Topock, Needles Californi r: 30126255 in Well Vault Material Volumes Installed Note: percentages are the actual
Iler Name:       J.         lling Asst:       A.         gger:       El         itor:       Set         tal Depth:       28         €       Groundwater         Sample ID       -         -       -	Saldana / A Amezquita llen Redner ean McGran 80.2 ft bgs	/ D Aldona ne System System CL CL CH CL CL	Easting (NAD83): Borehole Diameter: Static Water Level: Development End Dat Well Completion: Const	7615165.89         15.5-18 inches         See Log for Depths         e:       8/24/2022         □       Flush □       Stick-up ×	Location: PG&E	Topock, Needles Californi r: <u>30126255</u> in Well Vault Material Volumes Installed Note: percentages are the actua
lling Asst: A gger: El itor: Se tal Depth: 28 € Groundwater Sample ID - - - - - - - - - - - - - - - - - - -	Amezquita llen Redner ean McGran 80.2 ft bgs	/ D Aldona ne System System CL CL CH CL CL	Borehole Diameter: Static Water Level: Development End Dat Well Completion: (3.5 - 170.4') 10" SHUR-GRIP	15.5-18 inches           See Log for Depths           e:         8/24/2022           □         Flush □         Stick-up ×	Project Number	r: <u>30126255</u> in Well Vault Material Volumes Installed Note: percentages are the actua
gger:       EI         itor:       Set         tal Depth:       24         €       Groundwater         Sample ID         1       -         2       -         3       -         4       -         5       -         6       -         7       -         8       -         9       -       No         0       Groundwater         Samples       Collected	Ilen Redner ean McGran 80.2 ft bgs Bigger Bi	ne Sono CL CL CH CL CL	Static Water Level: Development End Dat Well Completion: Const (3.5 - 170.4') 10" SHUR-GRIP	See Log for Depths           a:         8/24/2022           □         Flush □         Stick-up ×	To Be Completed	in Well Vault Material Volumes Installed Note: percentages are the actua
tior: <u>Se</u> tal Depth: <u>26</u>	ean McGran 80.2 ft bgs b b b b b b b b b c b c b c b c b c b	Code CCH Class CIass	Development End Dat Well Completion: Const	e: <u>8/24/2022</u> ☐ Flush	To Be Completed	in Well Vault Material Volumes Installed Note: percentages are the actua
tal Depth:       28         Groundwater       Sample ID         -       -	80.2 ft bgs	Code CCH Class CIass	Well Completion: Const (3.5 - 170.4') 10" SHUR-GRIP	🗌 Flush 🗌 Stick-up 🖂	Calculated	Material Volumes Installed Note: percentages are the actua
£          Groundwater Sample ID            1	Fluvial Deposits Fluvial Deposits Fluvial Deposits Fluvial Deposits Fluvial Deposits	CL SC CH CL	(3.5 - 170.4') (3.5 - 170.4')		Calculated	Material Volumes Installed Note: percentages are the actua
	Fluvial Deposits Fluvial Deposits Fluvial Deposits Fluvial Deposits	CL SC CH CL	10" SHUR-GRIP			Note: percentages are the actua
2 3 4 5 6 7 8 9 0 Groundwater Samples Collected	Deposits Fluvial Deposits Fluvial Deposits Fluvial	SC CH CL	10" SHUR-GRIP			
3 45 66 78 9Groundwater Samples Collected	Deposits Fluvial Deposits Fluvial Deposits	CH CL			20	
	Deposits Fluvial Deposits Fluvial	CL			.0.	
5 6 7 8 9 0 Groundwater Samples Collected	Deposits				28	
7 8 9 0 Groundwater Samples Collected		SM			NO	
8 9 0 Groundwater Samples Collected						
 22 33 44 55	Alluvium Deposits	SW SW	(14.8 - 92.7') Portland Cement Grout with up to 6% bentonite hydrogel		(14.8 - 92.7') 658.7 gallons	(14.8 - 92.7') 741.5 gallons (1139 Note: Grout seal third lift
_	Alluvium Deposits	CL				
6 	Alluvium Deposits	SM				
breviations: USC	 CS = LInified	Soil Classific	. <u>                                     </u>	s = below ground surface, a	amsl = above mean	sea level SS = Stainless
				ppb = parts per billion, Notes		
				test from the upper and low		

ARC	ADIS		Well Const	truction Log	5	Sheet: 4 of 15
Date Started:	06/24/2022		Surface Elevation:	<u>622.31 ft amsl</u>	Well ID: TO	S-1
Date Completed:	07/09/2022		Shallow Well Elevation	: <u>N/A</u>		
Drilling Co.:	Cascade		Deep Well Elevation:	N/A	Client: PG&E	<u> </u>
Drilling Method:	Dual Rotary		Northing (NAD83):	<u>2101167.19</u>	Project: <u>Final</u>	GW Remedy Phase 2A
Driller Name:	<u>J Saldana / A Lamon</u>		Easting (NAD83):	7615165.89	Location: <u>PG&amp;E</u>	<u> E Topock, Needles California</u>
Drilling Asst:	<u>A Amezquita</u>	/ D Aldona	Borehole Diameter:	<u>15.5-18 inches</u>		
.ogger:	Ellen Redner		Static Water Level:	See Log for Depths	Project Numbe	r: <u>30126255</u>
Editor:	<u>Sean McGrar</u>	ne	Development End Date			
otal Depth:	280.2 ft bgs	1	Well Completion:		To Be Completed	in Well Vault
Groundwat		USCS Code USCS	S Constr S D	uction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volume
	Alluvium Deposits	SM	(3.5 - 170.4') 10" SHUR-GRIP SDR17 PVC Casing			
65  66	Alluvium Deposits	ML			NO	
	Alluvium Deposits	SW	(14.8 - 92.7') Portland Cement Grout with up to 6% bentonite hydrogel		(14.8 - 92.7') 658.7 gallons	(14.8 - 92.7') 741.5 gallons (1139 Note: Grout seal third lift
73 74 74 75 75 76 77	Alluvium Deposits	SW				
_77	Alluvium Deposits	SM				
			fication System, ft = feet, bg			
	-		cable, GW = groundwater, p	· · · ·		
	o water (ft ha	s) collecter	during the specific capacity	test from the upper and lo	wer screen intervals.	respectively.

Image: Sample ID     Image: Signed bit i	5 of 15	
Jate Complete:       07/09/2022       Shallow Well Elevation:       N/A       Client:       PG26E         Jointing Co.:       Cascade       Deep Well Elevation:       N/A       Client:       PG26E         Jointing Abst.       Jointing Abst.       Amezquita / D Aktona       Borehole Diameter:       15.518 inches       Location: PG8E Topoc         Jointing Abst.       Amezquita / D Aktona       Borehole Diameter:       15.518 inches       Project:       Project:       Project Number: 30126         orger:       Ellen Redner       Static Water Level:       See Log for Depths       Project Number: 30126         orger:       Seen McGrane       Development End Date:       8/24/2022       To Be Completed in Well         Groundwater       Static Water Level:       Static Water Level:       Static Water Level:       Construction Details       Calculated Metric         See       Groundwater       Static Water Level:       Calculated Metric         See       Groundwater       Static Water Level:       Static Water Level:       Static Water Level:       Static Water Level:       Calculater       Metric         88-       Groundwater       Set		
hrilling Method: Dual Rotary Northing (NAD83): 2101167.19 Project: Final GW Representation of the setting (NAD83): 7615165.89 Location: PG&E Topoc Northing Asset: A Amezquita /D Aldona Borehole Diameter: 15.518 inches Project Number: 30126 didor: Sean McGrane Development End Date: 8/24/2022 Construction Details Construction Details Calculated in Well Completion: Flush Stick-up To Be Completed in Well Completion: Flush Stick-up To Be Completed in Well Completion: Sean McGrane Static Water Level: See Log for Depths Stick-up To Be Completed in Well Completion: Flush Stick-up To Be Completed in Well Completion: Growtwater Seal of the setting (NAD83): 07.518 Inches Stick-up To Be Completed in Well Completion: Growtwater Seal of the setting (NAD83): 07.518 Inches Stick-up To Be Completed in Well Completion: Growtwater Seal of the setting (NAD83): 07.518 Inches Stick-up To Be Completed in Well Completion: Growtwater Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD83): 07.518 Inches Stick-up Key Seal of the setting (NAD84): 07.518 Inches Stick-up Key Seal of the setting (NAD84): 07.518 Inches Stick-up Key Seal of the setting (NAD84): 07.518 Inches Stick-up Key Sea		
briller Name:       J Saldana / A Lamon       Easting (NAD83):       7615165.89       Location: PG&E Topoc         ording Asst:       Amezguita / D Aldona       Borehole Diameter:       15.5-18 inches       Project Number: 30126         orger:       Ellen Redner       Static Water Level:       See Log for Depths       Project Number: 30126         ofaito:       Sean McGrane       Development End Date:       8/24/2022       To Be Completed in Well         Image: Sean McGrane       Development End Date:       8/24/2022       To Be Completed in Well         Image: Sean McGrane       Development End Date:       8/24/2022       Construction Details       Calculated Meterial Volumes       Material Volumes         Image: Sean McGrane       Image: Sean McGrane       Development End Date:       B/24/2022       To Be Completed in Well         Image: Sean McGrane       Image: Sean McGrane       Development End Date:       B/24/2022       To Be Completed in Well         Image: Sean McGrane       Image: Sean McGrane       Image: Sean McGrane       Construction Details       Calculated Meterial Volumes         Image: Sean McGrane       SM       Image: Sean McGrane         Image: Sean McGrane       Alluvium       Scan McGrane       Image: Se		
Amezquita / D Aldona       Borehole Diameter:       15.5-18 inches         orgger:       Ellen Redner       Static Water Level:       See Log for Depths       Project Number: 30126         citor:       Sean McGrane       Development End Date:       8/24/2022       To Be Completed in Well         280.2 ftbgs       Well Completion:       Flush       Stick-up 🗵 To Be Completed in Well         48       Groundwater       30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	•	
ogger:       Ellen Redner       Static Water Level:       See Log for Depths       Project Number: 30126         otal Depth:       280.2 ft bgs       Well Completion:       Flush       Stick-up IX       To Be Completed in Well         Ge       Groundwater Sample ID       Bg       2 g g g       2 g g g       2 g g g       2 g g g       Image: Source of the sourc	<u>k, Needles Californ</u>	
Sean McGrane         Development End Date:         8/24/2022           ordal Depth:         280.2 ft bgs         Well Completion:         Flush         Stick-up IX         To Be Completed in Well           5g g         Groundwater         gg g         G g		
Total Depth:         280.2 ft bgs         Well Completion:         Flush         Stick-up         To Be Completed in Well <u> <u> </u></u>	255	
Geoderate Sample D         Object Object Object         Construction Details         Calculated Material Volumes         Material Note: p volume		
	vauit	
	erial Volumes Installed ercentages are the actua vs the calculated volum	
Alluvium Beposits SC Alluvium Beposits SV-SM Alluvium Beposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SM Alluvium Deposits SM Alluvium Deposits SC Alluvium Deposits SM Alluvium Alluvium Deposits Alluvium Deposits Alluvium Alluvium Deposits Alluvium All		
-       -		
Alluvium Beposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SC Alluvium Deposits SM Alluvium Deposits SM Alluvium Deposits CL Alluvium Deposits CL Alluvium Deposits CL Alluvium Deposits CL Alluvium Deposits CL	2.7') 741.5 gallons (113' e: Grout seal third lift	
90     Groundwater Samples Collected     Alluvium Deposits     CL       91     -       92     -       92     -       93     -       93     -		
-30         (92.7 - 136.8')         (92.7 - 136.8')         (92.7 - 136.8')         >20% of           -         -         Grout with up to 6%         356.6 gallons         >20% of	36.8') 646 gallons (1819 rout seal second lift, use the calculated volume d ntial grout migration and forming during drilling.	
98_ 99_ 99_		
100	l, SS = Stainless	
teal, NR = No Recovery, N/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue		
epresent depth to water (ft. bgs.) collected during the specific capacity test from the upper and lower screen intervals, respec		

ARC	ADIS		Well Cons	truction Log		Sheet: 6 of 15		
ate Started:	06/24/2022		Surface Elevation:	<u>622.31 ft amsl</u>	Well ID: TO	S-1		
ate Completed:	07/09/2022		Shallow Well Elevation					
rilling Co.:	Cascade		Deep Well Elevation:	<u>N/A</u>	Client: PG&E			
•	Dual Rotary		Northing (NAD83):	<u>2101167.19</u>	•	GW Remedy Phase 2A		
	<u>J Saldana / A</u>		Easting (NAD83):	7615165.89	Location: <u>PG&amp;E</u>	<u>E Topock, Needles Californi</u>		
-	<u>A Amezquita</u>			<u>15.5-18 inches</u>				
00	Ellen Redner		Static Water Level:	See Log for Depths	Project Numbe	r: <u>30126255</u>		
ditor:				Development End Date: 8/24/2022		∑ To Be Completed in Well Vault		
otal Depth:	280.2 ft bgs		Well Completion:		<ul> <li>✓ To Be Completed</li> </ul>	in Well Vault		
Groundwat Sample IE		U SCS U SCS U SCS		ruction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volum		
	Alluvium Deposits	SC	(3.5 - 170.4') 10" SHUR-GRIP SDR17 PVC Casing					
 103 _104 105  106  107	Alluvium Deposits	SW-SM						
 _108  _109	Alluvium Deposits <	SC			3	(92.7 - 136.8') 646 gallons (1819		
_110 Groundwate _110 Samples Collected	r Alluvium Deposits	SC	(92.7 - 136.8') Portland Cement Grout with up to 6% bentonite hydrogel		(92.7 - 136.8') 356.6 gallons	Note: Grout seal second lift, use >20% of the calculated volume du to potential grout migration and		
_111	Alluvium Deposits	sc				voids forming during drilling.		
	Alluvium Deposits	SM						
 	Alluvium Deposits	SM						
_119	Alluvium Deposits	CL						
120 I bbreviations: U	SCS = Unified	I Soil Class	ification System, ft = feet, bg	s = below ground surface.	amsl = above mean	sea level, SS = Stainless		
			cable, GW = groundwater,					
Cal. 1911 - 1901 -			,		and 10			

te Completed: 07/0 Iling Co.: Cas Iling Method: Dua Iler Name: J Sa Iling Asst: A Ai gger: Eller itor: Sea tal Depth: 280 Groundwater Sample ID 21 - 22 - 23 - 24 - 25 - 26 - 27 - - 27 - - - - - - - - - - - - -	scade al Rotary aldana / A La mezquita / D n Redner an McGrane 0.2 ft bgs	) Aldona	Surface Elevation: _Shallow Well Elevation: _Deep Well Elevation: _Northing (NAD83): _Easting (NAD83): _Borehole Diameter: _Static Water Level: _Development End Date _Well Completion: (3.5 - 170.4') 10" SHUR-GRIP SDR17 PVC Casing	N/A           2101167.19           7615165.89           15.5-18 inches           See Log for Depths           ::         8/24/2022		<u>=</u> GW Remedy Phase 2A = Topock, Needles Californi r: <u>30126255</u>
Iling Co.: Cas Iling Method: Dua Iler Name: J Sa Iling Asst: A Al gger: Eller itor: Sea tal Depth: 280 Groundwater Sample ID 21_ 22_ 23_ 24_ 23_ 24_ 25_ 26_ 27_ 27_ 27_ 27_ 27_ 27_ 27_ 27	Alluvium		_ Deep Well Elevation: _ Northing (NAD83): _ Easting (NAD83): _ Borehole Diameter: _ Static Water Level: _ Development End Date _ Well Completion: Constru	N/A         2101167.19         7615165.89         15.5-18 inches         See Log for Depths         ::       8/24/2022         □       Flush □       Stick-up ×	Client: PG&E Client: PG&E Project: Final 4 Location: PG&E Project Number Project Number Calculated	E GW Remedy Phase 2A Topock, Needles Californi r: <u>30126255</u> in Well Vault Material Volumes Installed Note: percentages are the actua
Iling Method: Dua Iller Name: J Sa Iling Asst: A A gger: Eller itor: Sea tal Depth: 280 € Groundwater Sample ID 212 232 242 242 252 262 272 282 292 292 292 20	Alluvium		_ Northing (NAD83): _ Easting (NAD83): _ Borehole Diameter: _ Static Water Level: _ Development End Date _ Well Completion: Constru (3.5 - 170.4') _ 10" SHUR-GRIP	2101167.19         7615165.89         15.5-18 inches         See Log for Depths         :       8/24/2022         □       Flush □       Stick-up ×	Project: Final ( Location: PG&E Project Number To Be Completed	GW Remedy Phase 2A Topock, Needles Californi r: 30126255 in Well Vault Material Volumes Installed Note: percentages are the actual
Iller Name: <u>J Sa</u> Illing Asst: <u>A Ai</u> gger: <u>Eller</u> itor: <u>Sea</u> tal Depth: <u>280</u> 	Alluvium		_Easting (NAD83): _Borehole Diameter: _Static Water Level: _Development End Date _Well Completion: Constru (3.5 - 170.4') _10" SHUR-GRIP	7615165.89         15.5-18 inches         See Log for Depths         :       8/24/2022         □       Flush □       Stick-up ×	Location: <u>PG&amp;E</u>	Topock, Needles Californi r: <u>30126255</u> in Well Vault Material Volumes Installed Note: percentages are the actua
Iling Asst: A Ai gger: Eller itor: Sea tal Depth: 280	Alluvium		_Borehole Diameter: _Static Water Level: _Development End Date _Well Completion: Constru (3.5 - 170.4') 10" SHUR-GRIP	15.5-18 inches         See Log for Depths         :       8/24/2022         □       Flush □       Stick-up ×	Project Number	r: <u>30126255</u> in Well Vault Material Volumes Installed Note: percentages are the actua
gger: <u>Eller</u> itor: <u>Sea</u> tal Depth: <u>280</u> € Groundwater Sample ID 21 22 23 24 24 25 26 26 27 27 27 27 27 27 27 27 27 27	Alluvium	USCS Code USCS Class	Static Water Level: Development End Date Well Completion: Constru (3.5 - 170.4') 	See Log for Depths           ::         8/24/2022           □         Flush □         Stick-up ×	To Be Completed	in Well Vault Material Volumes Installed Note: percentages are the actua
tal Depth: <u>Sea</u> tal Depth: <u>280</u> € Groundwater Sample ID 21_ 22_ 23_ 24_ 25_ 26_ 27_ 27_ 27_ 27_ 27_ 28_ 24_ 25_ 26_ 27_ 27_ 27_ 27_ 27_ 27_ 27_ 27	An McGrane	USCS Code USCS Class	 _ Development End Date   Constru Constru (3.5 - 170.4')  10" SHUR-GRIP	: <u>8/24/2022</u> ☐ Flush	To Be Completed	in Well Vault Material Volumes Installed Note: percentages are the actua
tal Depth:     280       E     Groundwater Sample ID       21     -       21     -       23     -       24     -       25     -       26     -       27     -       -     -	Alluvium	USCS Code USCS Class	_Well Completion: Constru (3.5 - 170.4') 10" SHUR-GRIP	☐ Flush  Stick-up ×	Calculated	Material Volumes Installed Note: percentages are the actua
E Groundwater Sample ID 21 22 23 24 24 25 26 26 27	E Octuation		(3.5 - 170.4') 10" SHUR-GRIP		Calculated	Material Volumes Installed Note: percentages are the actua
21 22 23 24 25 26 27 27 21 22 22 23 24 24 25 26 27 27 27 27 28 29 29 20	Alluvium		10" SHUR-GRIP			Note: percentages are the actua
 22 23 24 25 26 27		SM	10" SHUR-GRIP			
27						
_	Alluvium Deposits	ML				
28  29 30No	Alluvium Deposits	ML	(92.7 - 136.8') Portland Cement Grout with up to 6% bentonite hydrogel		(92.7 - 136.8') 356.6 gallons	(92.7 - 136.8') 646 gallons (1810 Note: Grout seal second lift, use >20% of the calculated volume d to potential grout migration and voids forming during drilling.
Samples Collected 31 32	Alluvium Deposits	SM		(131.0 - 278.0') 16" Diameter Borehole		
	Alluvium Deposits S	W-SC	5			
35 	Alluvium Deposits	SM				
37  38 39	Alluvium Deposits	SM	(136.8 - 156.5') Portland Cement Grout with up to 6% bentonite hydrogel		(136.8 - 156.5') 111.9 gallons	(136.8 - 156.5') 123.5 gallons (110%) Note: Grout seal first lift
40       breviations: USCS	S = Unified S	oil Classificat	ion System, ft = feet. bas	실 환경지 s = below ground surface, a	ımsl = above mean	sea level, SS = Stainless
				pb = parts per billion, Notes		
	-		ring the specific capacity			

bits Name:       06/24/2022       Surface Elevation:       NA       Well D; TCS-1         Well D; Co:       Cascade       Deep Well Elevation:       NA       Client:       DGA:         Hilling Method:       Dial Bdarg       Northwell Elevation:       NA       Client:       DGA:         Hilling Method:       Dial Bdarg       Northwell Elevation:       NA       Client:       DGA:         Hilling Method:       Dial Bdarg       Northwell Elevation:       NA       Client:       DGA:         Hilling Method:       Dial Bdarg       Northwell Elevation:       NA       Client:       DGA:         Grandmark       A mazgula LD Aldona:       Boarhole Diameter:       15.5-18 httaba:       Location:       PGA:       Devisionment End Diameter:       15.2-18 httaba:       Devisionment End Diameter:       12.4/2022         Board       Orentrate       Bg.       Bg.       Bg.       Bg.       Bg.       Bg.       Bg.       Bg.       Devisionment End Diameter:       12.4/2022       Devisionment End Diameter:       Devisionment End Diameter:       Coactaterit       Method Name end Diameter:       Method Name end Diameter:       Devisionment End Diameter:       Coactaterit       Method Name end Diameter:       Devisionmenter:       Devisionmenter:       Devisionmenter:       Devisionmente	ARC	ADIS		Well Const	ruction Log		Sheet: 8 of 15
tate Completed 07.08/2022				Surface Elevation:	<u>622.31 ft amsl</u>		S-1
Inling Mehot:       Dual Rolary       Northing (NAD83)       2101167.19       Project:       End (NA Benedy Phase 2A)         Inling Asst:       Advacuate JD Advaca       Borehole Diameter       155.16.16.06.8       Location: C26E Topools. Needles Califor         Status Water Level       Status Water Level       Status Water Level       Status Water Level       Project:       To Be Completed in Well Vault         Status Water Level       Status Water Level       Status Water Level       Status Water Level       To Be Completed in Well Vault         Status Water Level       Status Water Level       Status Water Level       Status Water Level       Construction Beaks       Construction Beaks       Naterial Vault       Naterial Vault         Status Water Level       Naterial Vault       Naterial Vault         Status Water Level       Naterial Vault       Nate	ate Completed:	07/09/2022		Shallow Well Elevation:	<u>N/A</u>		
Hiler Name:       J. Saldana / A Lamon       Easting (NADB3):       721:516:5.8.9       Location: PCSE Topock. Meedles Califor         geger:       Elen.Redner:       Static Water Level:       See Log for Deptha       Project Number: 30126255         itto::       Sea MoSTrate       Development Em Date:       8224/022       Project Number: 30126255         itto::       Sea Log for Deptha       Project Number: 30126255       Metocal Vibrate Instation         itto::       Samue E       Big       Construction Details       Caloination Vibrate Instation         itto::       Samue E       Big       Signer:       California       Metocal Vibrate Instation         itto::       Samue E       Big       Construction Details       Caloination       Metocal Vibrate Instation during         itto::       Samue E       Big       Construction Details       Caloination       Metocal Vibrate Instation during         itto::       Big       Construction Details       Caloination       Metocal Vibrate Instation during         itto::       Big       Signer:       Signer:       California       Metocal Vibrate Instation during         itto::       Big       Construction Details       California       Metocal Vibrate Instation during       Metocal Vibrate Instatin during         ittto:: <td< td=""><td>illing Co.:</td><td>Cascade</td><td></td><td>Deep Well Elevation:</td><td><u>N/A</u></td><td> Client: PG&amp;E</td><td></td></td<>	illing Co.:	Cascade		Deep Well Elevation:	<u>N/A</u>	Client: PG&E	
Hilling Asset:       AAnnezquita /D Aktona       Borehole Diameter:       15.5-18 Anches         ger       Elen Redner:       Statutory       Project Number: 30126255         statutory       280.2 ft bgs       Wall Completion:       Flash       Statutory         statutory       280.2 ft bgs       Wall Completion:       Flash       Statutory       Note Completion:       Note Completion:         statutory       Statutory       Statutory       Wall Completion:       Flash       Statutory       Note Completion:       Note Statutory         Statutory       Statutory       Statutory       Material Volume       Material Volume       Material Volume       Note Statutory         141       Internet Note Statutory       Statutory       Statutory       Note Statutory       Note Statutory         142       Internet Note Statutory       Statutory       Statutory       Note Statutory       Note Statutory       Note Statutory         144       Internet Note Statutory       Statutory       Statutory       Note Statutory       Note Statutory       Note Statutory         144       Internet Note Statutory       Statutory       Statutory       Note Statutory       Note Statutory       Note Statutory         145       Internet Note Statutory       Statutory <t< td=""><td>illing Method:</td><td>Dual Rotary</td><td></td><td>Northing (NAD83):</td><td><u>2101167.19</u></td><td>Project: <u>Final</u></td><td>GW Remedy Phase 2A</td></t<>	illing Method:	Dual Rotary		Northing (NAD83):	<u>2101167.19</u>	Project: <u>Final</u>	GW Remedy Phase 2A
opgor         Ellen Radner         Statu Water Level:         See Log for Depths         Project Number 30126255           val Depth:         280.2 ft bgs         Well Completion         Project Number 30126255         Metral Volume Number 30126255           ge         Construction         98         0.0000         Project Number 30126255         Metral Volume Number 30126255           ge         Construction         98         0.0000         Project Number 30126255         Metral Volume Number 30126255           ge         Construction         98         0.0000         Project Number 30126255         Metral Volume Number 30126255           ge         Construction         98         0.0000         Project Number 30126255         Metral Volume Number 30126255           ge         Construction         98         0.0000         Project Number 30126255         Metral Volume Number 30126255           141	iller Name:	<u>J Saldana / A</u>	Lamon	- , ,	7615165.89	Location: <u>PG&amp;E</u>	<u>E Topock, Needles Californ</u>
Statute         Seam McGrane         Development End Date:         R2/2/022           Istal Depth:         28.0.2 ft bgs         Well Completion:         Flush Stick-up II To Be Completed in Well Vault           Ige         Gouvanies         Igg g         I	illing Asst:	-					
Datal Depth:         280.2 It bgs         Well Completion:         Fush         Stick-up         To Be Completed in Well Vauit           Sec         Convolution         000000000000000000000000000000000000					•	Project Numbe	r: <u>30126255</u>
Bit     Groundwater     Bit     Bit     Construction     Details     Construction     Details       141     1     1     1     1     1     1     1     1       142     1     1     1     1     1     1     1     1       143     1     1     1     1     1     1     1     1       144     1     1     1     1     1     1     1     1       144     1     1     1     1     1     1     1     1       144     1     1     1     1     1     1     1     1       144     1     1     1     1     1     1     1     1       144     1     1     1     1     1     1     1     1       144     1     1     1     1     1     1     1     1       144     1     1     1     1     1     1     1     1       145     1     1     1     1     1     1     1     1       146     1     1     1     1     1     1     1       146     1     1 </td <td></td> <td></td> <td>ne</td> <td></td> <td></td> <td></td> <td></td>			ne				
141	otal Depth:		1			∐ To Be Completed	in Well Vault
141 142 143 144 144 144 145 144 144 145 144 144	Groundwat Sample I	Geologic Formation	USCS USCS USCS	Constru 5	uction Details		Material Volumes Installed Note: percentages are the actua volume vs the calculated volum
Portland Cement Hag No Groutwater Samples Collected Alluvium Deposits SM Alluvium Deposits SM Alluvium Deposits SM Alluvium Deposits SM Alluvium Deposits SM Alluvium Deposits SM Alluvium Deposits SM (156.5 - 157.9) (156.5 - 157.9) (157.9 - 160.9) (157.9 - 160.9) (	_  42_  43_  143_  144_  145_  146_ _		SM	🔅 📔 10" SHUR-GRIP 🚫		0	
Alluvium Deposits SM Alluvium Deposits SM	- No 150 Groundwate Samples Collected	r Deposits		Portland Cement Grout with up to 6%			
154       Deposits       SM       Image: Construction of the calculated volume due to the calculated vo	153						
154			SM SM				
156	154	Deposits					
157       Alluvium       SM       (156.5 - 157.9')       Wyoming Bentonite       (156.5 - 157.9')       Note: Bentonite 'seal, used >20         158       158       (157.9 - 160.9')       Note: Transition sand         160       Debreviations:       USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, SS = Stainless       (157.9 - 160.9')       Note: Transition sand         160       Debreviations:       USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, SS = Stainless       (157.9 - 160.9')       Note: Transition sand         160       NR = No Recovery, N/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes:       Solid blue and hollow blue water table marks	_						(156.5 - 157 9') 2 hars (133%
159       Cemex #60 Mesh       Comex #60 Mesh       Comex #60 Mesh       Cemex #60 Mesh       Note: Transition sand       <	_		SM	Wyoming Bentonite Chips - Holeplug	o, oo oo		Note: Bentonite seal, used >20 of the calculated volume due to potential voids that formed during
obreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, SS = Stainless and NR = No Recovery, N/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks	 159						(157.9 - 160.9') 5 bags (109% Note: Transition sand
eal, NR = No Recovery, N/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks				ication System ft - fact bar		amel - above mast	con loval SS - Stainlass
present depth to water (ft. bgs.) collected during the specific capacity test from the upper and lower screen intervals, respectively.	eai. ink = ino h						

ARC	ADIS			Well Const	ruction Log	5	Sheet: 9 of 15
	06/24/2022			_Surface Elevation:	622.31 ft amsl	Well ID: TO	`S_1
ate Completed:	07/09/2022			_Shallow Well Elevation:	<u>N/A</u>		,0-1
rilling Co.:	Cascade			_Deep Well Elevation:	<u>N/A</u>	Client: PG&E	<u>=</u>
rilling Method:	Dual Rotary			_Northing (NAD83):	2101167.19	Project: <u>Final</u>	GW Remedy Phase 2A
riller Name:	J Saldana / A	Lamon		_Easting (NAD83):	7615165.89	Location: PG&E	<u> E Topock, Needles Californi</u>
rilling Asst:	A Amezquita	/ D Aldo	na	Borehole Diameter:	15.5-18 inches		
00	Ellen Redner Sean McGrane		_Static Water Level:	See Log for Depths	Project Numbe	r: <u>30126255</u>	
				_Development End Date:			
otal Depth:	280.2 ft bgs	<u>г т</u>		_Well Completion:		To Be Completed	in Well Vault
Groundwate Geb Sample ID		USCS Code	USCS Class	Constru	ction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volum
				(3.5 - 170.4') (3.5 - 170.4') (3.5 - 170.4') 10" SHUR-GRIP (3.5 - 3.5 -	•         •	(157.9 - 160.9') 4.6 bags	(157.9 - 160.9') 5 bags (109%) Note: Transition sand
No _162 Groundwater	Alluvium	SM					
Samples Collected	Deposits						
_163							
_164							
	Alluvium	SM					
_165	Deposits						
_	Alluvium	SM					
166	Deposits						
164-169	Alluvium	SM					
(1100 ppb) 167 4/3/2022	Deposits						
10:50	Alluvium Deposits	SM					
_168							
	Alluvium Deposits	SM					(400.0
							(160.9 - 192.9') 72.3 bags (149%) Note: Filter pack, used >20% o
170							the calculated volume due to potential voids that formed durin
_170	Alluvium			(170.4 - 190.6) 10" 18-Slot 316L SS		(160.9 - 192.9')	drilling. Swabbed the filter pack
171	Deposits	ML		Wire Wrap Screen		` 48.6 bags ´	approximately 30 minutes prior the installation of the bentonite
_171							seal. Approximately 4.7 bags of sand passed through the screet
470							during swabbing was subtracte
_172				(160.9 - 192.9')			from the actual volume installed
				Cemex #1/20 Mesh (20x40) Lapis Lustre			
_173				Sand			
					$\square$		
.174							
175	Allundum						
-	Alluvium Deposits	ML			H		
_176							
-		[					
_177							
_							
_178		[					
_179							
· _							
180				$\frac{1}{1}$			
				ion System, ft = feet, bgs CW = aroundwater, pr			
ical, INR – INO R		•	•	e, Gvv = groundwater, pp ring the specific capacity t			llow blue water table marks
proport dante t							

ARC	ADIS		Well Const	ruction Log	:	Sheet: 10 of 15
ate Started:	06/24/2022		Surface Elevation:	622.31 ft amsl	Well ID: TO	S-1
ate Completed:	07/09/2022		Shallow Well Elevation:	<u>N/A</u>		
Prilling Co.:	Cascade		Deep Well Elevation:	<u>N/A</u>	Client: PG&I	Ξ
Vrilling Method:	Dual Rotary		Northing (NAD83):	<u>2101167.19</u>	Project: <u>Final</u>	GW Remedy Phase 2A
riller Name:	<u>J Saldana / A</u>	Lamon	Easting (NAD83):	7615165.89	Location: <u>PG&amp;I</u>	<u> E Topock, Needles Californi</u>
Prilling Asst:	<u>A Amezquita</u>	/ D Aldona	Borehole Diameter:	15.5-18 inches		
ogger:	Ellen Redner		Static Water Level:	See Log for Depths	Project Numbe	r: <u>30126255</u>
ditor:	Sean McGrane		Development End Date:			
otal Depth:	280.2 ft bgs		Well Completion:		To Be Completed	in Well Vault
Groundwat		USCS Code USCS Class	Constru	ction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volum
	Alluvium Deposits	ML	(170.4 - 190.6')			
	Alluvium Deposits	SM	(160.9 - 192.9') Cemex #1/20 Mesh (20x40) Lapis Lustre Sand	(190.6 - 214.1') 10" SHUR-GRIP SDR17 PVC Casing	(160.9 - 192.9') 48.6 bags	160.9 - 192.9') 72.3 bags (1499 Note: Filter pack, used >20% of the calculated volume due to potential voids that formed durin drilling. Swabbed the filter pack f approximately 30 minutes prior the installation of the bentonite seal. Approximately 4.7 bags of sand passed through the screed during swabbing was subtracte from the actual volume installed
_193  _194 TCS-1-VAS _ 192-197 (<0.025 ppl		SW	(192.9 - 194.2') Cemex #60 Mesh (40x70) Lapis Lustre Sand		(192.9 - 194.2') 2 bags	(192.9 - 194.2') 3 bags (150%) Note: Transition sand, used >20 of the calculated volume due to potential voids that formed durin drilling.
_195`4/4/2022 09:45	Deposits					
	Alluvium	ML				
_196	Deposits					
-	Alluvium	SW-SM				(194.2 - 204.5') 20 buckets (160
_197	Deposits		(194.2 - 204.5') Pel-Plug Bentonite —		(194.2 - 204.5') 12.5 buckets	Note: Intermediate seal, used >20% of the calculated volume of
-			Pellets 3/8" TR30			to potential voids that formed during drilling.
.198  .199	Alluvium Deposits	ML				gg.
200 Abbreviations: U	SCS = Unifier	Soil Classific	ation System, ft = feet, bgs	= below ground surface	amsl = above mean	sea level. SS = Stainless
				-		llow blue water table marks
				· · · · ·		
present depth t	o water (ft. bg	s.) collected d	uring the specific capacity	test from the upper and lo	wer screen intervals	, respectively.

ARC	ADIS		Well Const	ruction Log		Sheet: 11 of 15
Date Started:	06/24/2022		Surface Elevation:	<u>622.31 ft amsl</u>	Well ID: TO	CS-1
ate Completed:	07/09/2022		Shallow Well Elevation:	<u>N/A</u>		
Prilling Co.:	Cascade		Deep Well Elevation:	<u>N/A</u>	Client: <u>PG&amp;I</u>	
Prilling Method:	Dual Rotary		Northing (NAD83):	2101167.19	Project: <u>Final</u>	GW Remedy Phase 2A
oriller Name:	<u>J Saldana / A</u>		Easting (NAD83):	7615165.89	Location: <u>PG&amp;I</u>	E Topock, Needles Californ
Drilling Asst:	<u>A Amezquita</u>			15.5-18 inches		
ogger:	Ellen Redner		Static Water Level:	See Log for Depths	Project Numbe	er: <u>30126255</u>
Editor:	Sean McGrane		Development End Date			
Total Depth:	280.2 ft bgs		Well Completion:		To Be Completed	l in Well Vault
Groundwat Sample I		USCS Code USCS Class		ction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volum
		ML		— (190.6 - 214.1') 10" SHUR-GRIP		
_201				SDR17 PVC Casing		
	Alluvium Deposits	ML .				
_202			· · · · · · · · · · · · · · · · · · ·		(104.2, 204.5)	(194.2 - 204.5') 20 buckets (160' Note: Intermediate seal, used
			Pel-Plug Bentonite — Pellets 3/8" TR30		(194.2 - 204.5') 12. <mark>5 buckets</mark>	>20% of the calculated volume d to potential voids that formed
_203						during drilling.
_204	Alluvium	ML				
	Deposits		··· (204.5 - 205.5')			(204.5 - 205.5') 5 bags (333%
_205			Cemex #60 Mesh		(204.5 - 205.5')	Note: Transition sand, used >20
			(40x70) Lapis Lustre		1.5 bags	of the calculated volume due t potential voids that formed during
_206						drilling.
	All					
_207	Alluvium Deposits	ML .				
_208						
_209						
_210						
	Alluvium					
_211	Deposits	ML				(205.5 - 279.0') 170.6 bags (145
						Note: Filter pack, used >20% o the calculated volume due to
_212						potential voids that formed durin
			(205.5 - 279.0') Cemex #1/20 Mesh		(205.5 - 279.0')	drilling. Swabbed the filter pack approximately 30 minutes and ra
_213			(20x40) Lapis Lustre		117.8 bags	prealignment "dummy tool" prior installation of the intermediate
			Sand			seal. Approximately 3.4 bgs of sand passed through the scree
_214		└─ ─ ┼┤ <u>┤</u>				during swabbing and was subtracted from the actual volum
				(214.1 - 268.9') 10.8" 18-Slot 316L		installed.
_215				SS Wire Wrap Screen Screen		
	Alluvium Deposits	SM				
_216						
_217						
_218						
	Alluvium Deposits	ML				
_219						
220					 	
			cation System, ft = feet, bgs			
iteal, NR = No F			able, GW = groundwater, pr during the specific capacity	· · ·		
	o water / the			toot from the upper and it.		

9	ARC	ADIS			Well Const	ruction Log	:	Sheet: 12 of 15
Date S		06/24/2022			_Surface Elevation:	<u>622.31 ft amsl</u>	Well ID: TO	CS-1
	•	07/09/2022			_Shallow Well Elevation:			
Drilling		Cascade			_Deep Well Elevation:	<u>N/A</u>	Client: PG&I	
-		Dual Rotary			_Northing (NAD83):	2101167.19	•	GW Remedy Phase 2A
Driller N		J Saldana / A			_Easting (NAD83):	<u>7615165.89</u>	Location: <u>PG&amp;I</u>	E Topock, Needles Californi
Drilling		<u>A Amezquita / D Aldona</u> <u>Ellen Redner</u> Sean McGrane		na	_Borehole Diameter: _Static Water Level:	15.5-18 inches See Log for Depths	Project Numbe	r: 30126255
.ogger Editor:				_Development End Date:	÷ .		. <u>50120255</u>	
Fotal D		280.2 ft bgs			_Well Completion:		To Be Completed	l in Well Vault
c	-	in the second se	(0	(0, (0)	Constru	ction Details		Material Volumes Installed
Depth (ft)	Groundwate Sample ID		USCS Code	USCS Class			Calculated Material Volumes	Note: percentages are the actua volume vs the calculated volume
		Alluvium Deposits	ML					
222								
_223	TCS-1-VAS 221-226	_ Alluvium Deposits	SM			H		
	(<0.025 ppb	))						
_224	4/5/2022 10:45							
		Alluvium Deposits	SW					
226		Alluvium						
		Deposits	SM					
_227								
_228		All						(205.5 - 279.0') 170.6 bags (145%
- – 229		Alluvium Deposits	ML					Note: Filter pack, used >20% of the calculated volume due to
_229								potential voids that formed durin drilling. Swabbed the filter pack for
230					(205.5 - 279.0') Cemex #1/20 Mesh		(205.5 - 279.0')	approximately 30 minutes and ra prealignment "dummy tool" prior
					(20x40) Lapis Lustre		117.8 bags	installation of the intermediate seal. Approximately 3.4 bgs of
_231		Alluvium	SM					sand passed through the screer
		Deposits						during swabbing and was subtracted from the actual volum
_232								installed.
_233		Alluvium Deposits	ML					
_204		Alluvium	SM					
		Deposits	SIVI					
_236		Alluvium Deposits	ML					
_237								
_238		Alluvium						
- – _239_		Deposits	ML					
240						<u> </u>		
bbrev						= below ground surface, a		
						· · · ·		llow blue water table marks
eprese	ent depth t	o water (ft. bg	s.) colleo	cted du	ring the specific capacity	test from the upper and lov	wer screen intervals	, respectively.

	ADIS		Well Const	ruction Log		Sheet: 13 of 15
Date Started:	06/24/2022		Surface Elevation:	622.31 ft amsl	Well ID: TO	S-1
ate Completed:			Shallow Well Elevation			
Drilling Co.:	Cascade		Deep Well Elevation:	<u>N/A</u>	Client: <u>PG&amp;E</u>	
•	Dual Rotary		Northing (NAD83):	2101167.19	-	GW Remedy Phase 2A
Driller Name: Drilling Asst:	<u>J Saldana / A</u>		Easting (NAD83): Borehole Diameter:	7615165.89 15.5-18 inches	Location: <u>PG&amp;E</u>	E Topock, Needles Californ
Logger:	<u>A Amezquita / D Aldona</u> Ellen Redner		Static Water Level:	See Log for Depths	Project Numbe	r: 30126255
ditor: Sean McGrane		Development End Date			1. 00120200	
otal Depth:	280.2 ft bgs		Well Completion:		To Be Completed	in Well Vault
Groundwat		USCS Code USCS Class	Constr	uction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volume
241  	Alluvium Deposits	ML		(214.1 - 268.9') 10.8" 18-Slot 316L SS Wire Wrap Screen Screen		
_245 246 247 248 248 248 250 250 251	Alluvium Deposits		(205.5 - 279.0') Cemex #1/20 Mesh (20x40) Lapis Lustre Sand		(205.5 - 279.0') 117.8 bags	(205.5 - 279.0') 170.6 bags (1459 Note: Filter pack, used >20% o the calculated volume due to potential voids that formed durin drilling. Swabbed the filter pack f approximately 30 minutes and ra prealignment "dummy tool" prior installation of the intermediate seal. Approximately 3.4 bgs of sand passed through the screen during swabbing and was subtracted from the actual volum
_252  _253	Alluvium Deposits	SM				installed.
254	Alluvium Deposits	ML 0				
		SM				
259	Alluvium Deposits	SM				
	SCS = Unified	Soil Classific	ation System, ft = feet, bg:	∴ाःःःः s = below ground surface, a	 msl = above mean	sea level, SS = Stainless
				pb = parts per billion, Notes		
	SCS = Unified	Soil Classific = Not Applica	ble, GW = groundwater, p		: Solid blue and ho	llow blue water table r

	ADIS			struction Log	•	Sheet: 14 of 15
ate Started:	06/24/2022		Surface Elevation:	622.31 ft amsl	Well ID: TO	CS-1
ate Completed:	07/09/2022		Shallow Well Elevatio	n: <u>N/A</u>		
orilling Co.:	Cascade		Deep Well Elevation:	N/A	Client: PG&	
•	Dual Rotary		Northing (NAD83):	<u>2101167.19</u>	•	GW Remedy Phase 2A
viller Name:	<u>J Saldana / A</u>		Easting (NAD83):	7615165.89	Location: <u>PG&amp;</u>	<u> E Topock, Needles Califorr</u>
Prilling Asst:	<u>A Amezquita /</u>	D Aldona	Borehole Diameter: <u>15.5-18 inches</u>			
ogger: ditor:	Ellen Redner Sean McGran	0	Static Water Level: Development End Da	See Log for Depths	Project Numbe	r: <u>30126255</u>
otal Depth:	280.2 ft bgs	C	Well Completion:		 ] To Be Completed	in Well Vault
	-			struction Details		
Groundwat		USCS Code USCS Class			Calculated Material Volumes	Material Volumes Installed Note: percentages are the actu volume vs the calculated volum
		SM		10.8" 18-Slot 316L SS Wire Wrap Screen Screen		(205.5 - 279.0') 170.6 bags (145 Note: Filter pack, used >20% of the calculated volume due to potential voids that formed duri
269_ 4/13/2022 09:40 270_ 271_ 272_ 273_ - 273_ -	Weathered Bedrock - Conglomerate	**************************************	(205.5 - 279.0') Cemex #1/20 Mash (20x40) Lapis Lustre Sand	(268.85 - 274.01') 10" SHUR-GRIP SDR1 —PVC Sump and SS End Cap	(205.5 - 279.0') 117.8 bags	drilling. Swabbed the filter pack approximately 30 minutes and i prealignment "dummy tool" prio installation of the intermediat seal. Approximately 3.4 bgs of sand passed through the scree during swabbing and was subtracted from the actual volu installed.
274 275No Groundwate Samples 276Collected  277	Competent Bedrock - Conglomerate	****				
 278 279 280	Competent Bedrock - Conglomerate	× × × × × × × × × × × × × × × × × × ×		(278.0 - 280.2') 15.5" Diameter Borehole		
bbreviations: U				gs = below ground surface, a		
	N1/A	- Not Applied	blo CW = areundwater	nnh - narts ner hillion Notes	Solid blue and bo	llow blue water table mark

oate St	and a str					ruction Log		
-	arted:	06/24/2022			_Surface Elevation:	622.31 ft amsl	Well ID: TO	CS-1
ate Co	ompleted:	07/09/2022			_Shallow Well Elevation:	<u>N/A</u>		55-1
Drilling (	Co.:	Cascade			_Deep Well Elevation:	N/A	Client: <u>PG&amp;I</u>	E
-		Dual Rotary			_Northing (NAD83):	2101167.19	Project: <u>Final</u>	GW Remedy Phase 2A
Driller N		J Saldana / A	Lamon		_Easting (NAD83):	7615165.89	-	E Topock, Needles Californi
Drilling /	Asst:	<u>A Amezquita</u>	/ D Aldo	na	_Borehole Diameter:	15.5-18 inches		
ogger:		<u>Ellen Redner</u>			Static Water Level:	See Log for Depths	Project Numbe	r: <u>30126255</u>
ditor:		Sean McGrar	ne		_Development End Date:	8/24/2022		
otal De	epth:	<u>280.2 ft bgs</u>			_Well Completion:	Flush Stick-up	$\times$ To Be Completed	in Well Vault
Depth (ft)	Groundwate Sample ID		USCS Code	USCS Class		ction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volume
				<u>x x x</u>				
_282						2	2	0
_283							C.	<u>n</u> V
_284						• •		
							NO.	•
_287								
_288			<b>C</b>					
_289								
_290					0	0		
_291				Q				
_292					c			
					GV			
295								
_296								
_297								
_298								
_299								
<u>300</u> bbrevi	ations: U	SCS = Unified	Soil Cla	assificat	tion System, ft = feet, bgs	= below ground surfac	e, amsl = above mean	sea level, SS = Stainless
								llow blue water table marks
					ring the specific capacity t			

· · · · · · ·	CADI	3		BC	oring	Log	Sheet: 1 of 12				
Date Started:	04/01/	2022			e Elevat		Boring No	: TCS-2 P	ilot		
Date Complete					ig (NAD		_	-			
Drilling Co.: Drilling Method:	<u>Casca</u> : <u>Sonic</u>			Easting Total D	g (NAD8	3): <u>7615150.98</u> <u>232 ft bgs</u>	_ Client: <u>PG&amp;E</u> _ Project: <u>Final (</u>	SW Remedy P	nase 24		
-	Drill Rig Type: Boart Longyear drill head				ole Diam	0	_ Location: PG&E	•			
Priller Name: <u>Matt Arnold</u>						Vater: 129.5 ft bgs		··· · · · · · ·			
Drilling Asst:	<u>D Hoe</u>	ppner / R We	st	Sampli	ng Meth		_ Project Number:	30126255			
_ogger:	<u>Ellen F</u>				ng Inter		-				
Editor:	<u>Sean I</u>	<u>McGrane</u>		Conver	ted to V	′ell: ⊠ Yes 🗌 No					
Depth (ft) Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid		
 _ 1 			Fluvial Deposits	sw		0-1.5 ft) Well graded sand with gravel (SW); rery fine to very coarse grained, subangular to subangular to subround; trace silt; trace clay; vas excavated with air-knife and placed back ample is disturbed.	subround; some pround; little granules, dry. NOTE: Material	(0.0 - 10.0') Air-knifed for utility clearance on 4/1/22, excavated	(0.0 - 10.0') No drilling fluid used		
2 3 4 5 6 _ 7					NR	N //.	1.5-7.0 ft) No Recovery.		material put back in hole.		
	No Sieve Samples Collected	Samplas		sw		rery fine to very coarse grained, subangular to mall to very large pebbles, subangular to sub subangular to subround; trace silt; trace clay; vas excavated with air-knife and placed back ample is disturbed. 10-12.5 ft) Poorly graded sand with gravel (SI	12.5 ft) Poorly graded sand with gravel (SP); brown (10YR 5/3); (10.0				
 		Collected	Collected	Conecieu	Fluvial Deposits	SP		rery fine to fine grained, little medium to very of subangular to subround; little granules, suban ttle small to large pebbles, subangular to sub race clay; dry.	gular to subround;	Soft drilling	No drilling fluid used
 13 14  _ 15  16			Fluvial Deposits	SM		12.5-17 ft) Silty sand with gravel (SM); yellow ery fine to very coarse grained, subangular to small to very large pebbles, subangular to sub ranules, subangular to subround; little clay; o 15.5-17 ft) Very large pebbles; potentially fror sulverized by drilling; light brownish gray (10Y	o subround; some round; little silt; little dry.				
17 18 18 19   _			Alluvium Deposits	sw		17-24.5 ft) Well graded sand with gravel (SW rery fine to very coarse grained, subangular to mall to very large pebbles, subangular to sub subangular to subround; trace silt; trace clay;	o subround; some round; little granules, dry.	(17.0 - 20.0') Soft drilling	(17.0 - 20.0') No drilling fluid used		
						et, bgs = below ground surface, am			•		
		<u> </u>		· ·		, Notes: Solid blue and hollow blue v		· ·			
00 1 +	untered fro	om logging an	iu aepth to	water	neasure	d during the first VAS interval, respe	cuvely. Apparent p	aniai recoverie	s can be the		

<b>P</b> AF	ARCADIS					Boring Log					Sheet: 2 of 12												
Date Started	l: <u>C</u>	4/01/	2022		Surfac			587.37 ft amsl			Boring No.: <u>TCS-2 Pilot</u>												
Date Compl					Northing (NAD83):			2100921.2															
Drilling Co.:		asca			Easting		83):	7615150.9			Client:	PG&E											
Drilling Meth			Drilling		Total D	•		232 ft bgs			Project:		W Remedy Pl										
Drill Rig Typ			<u>_ongyear drill</u>		Boreho			4-7 inches			Location:	PG&E	Topock, Need	les California									
Driller Name	-							<u>129.5 ft bo</u>															
•	illing Asst: <u>D Hoeppner / R West</u> ogger: <u>Ellen Redner</u> ditor: <u>Sean McGrane</u>				Sampli	-		-	) ft. Core Ba	arrei	Project N	umber:	30126255										
					Sampli	-		<u>Continuou</u>															
Editor:	<u> </u>	ean r			Conve			🛛 Yes [	No														
Depth (ft) Recovery (ft)	Sie Samp		Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class			Soil Descri	ption			Drilling Notes	Drilling Fluid									
_21				Alluvium Deposits	SW		very fine small to	to very coarse very large peb	ed sand with gr e grained, suba bles, subangu d; trace silt; tra	angular to s lar to subro	ubround; so und; little gr	me	(20.0 - 27.0') Normal drilling	(20.0 - 27.0') No drilling fluic used									
25 26				Alluvium Deposits	SP	0. 	very fine	to medium gr llar to subroun all to large peb	ded sand with g ained, little coa d; little granule bles, subangu	rse to very s, subangu	coarse grai lar to subro	ned, und;											
				Alluvium Deposits	ML		slow dila subangu	tancy; little ve lar to subroun	ry fine to very o d; little clay; tra	coarse grain ace granule	3); medium plasticity, grained sand, anules, subangular to vangular to subround; (27.0 - 37.0') (27.0 - 3												
28 29 30	No Si Samp Collec	ples Ground cted Sam	No Groundwater Samples Collected	Groundwater Samples	Groundwater Samples	Groundwater Samples	Groundwater Samples	Groundwater Samples	Alluvium Deposits	SM		(27-31 f subangu	iedium stiff; m ) Silty sand (S Ilar to subroun d; trace clay; r	M); brown (7.5 d; some silt; tr	YR 5/3); ve ace granule			No drilling fluid used					
_31				Alluvium	SW				ed sand (SW);														
				Deposits Alluvium	<u> </u>				ace granules, : les, subangula														
_327.5				Deposits	SM		(31.5-32	.5 ft) Silty san	d (SM); brown	(7.5YR 5/3)	; very fine g	rained,											
-				Alluvium	sw-sc		subangi subroun	d; trace clay; r	d; some silt; tr noist; rapid dila	ace granule atancy.	es, subangu	lar to											
_33 _34 _35													Alluvium Deposits	SM		5/3); ver medium granules (33-35.5 subangu	y fine to very o pebbles, suba s, subangular t ft) Silty sand llar to subroun	ed sand with cla coarse grained; angular to subro o subround; dr (SM); brown (7 (d; some silt; so d; moist; rapid	ittle clay; ound; trace y; trace cla .5YR 5/3); ome clay; tr	trace small t silt; trace y nodules. very fine gra	ined,		
				••••			1 3 (35.5-36	.5 ft) Well grad	ded sand (SW)	); brown (10	)YR 5/3); ve	ry fine											
_36				Alluvium Deposits	SW		to very c	oarse grained	; trace granule pebbles, suba	s, subangu	lar to subrou	und;											
-							trace cla	ıy; dry.		0													
_37	-								ed sand with gr e grained, suba				(37.0 - 47.0')	(37.0 - 47.0)									
 _38 				Alluvium Deposits	SW		granules	s, subangular t	o subround; lit d; trace silt; tra	tle small to	very large p	ebbles,	Normal drilling	No drilling flui used									
40							•																
bbreviation	s: USC	S = l	Jnified Soil Cl	assification	n Syste	m, ft =	feet, ba	s = below a	round surfa	ce, amsl	= above i	mean se	a level, NR =	No Recover									
					-								present depth										
			<u> </u>		· ·								artial recoverie										
ys./ ms. en					core b			-			2 I I		-										

ARCAD	IS	Borin	g Lo	g	Sheet: 3 of 12				
ate Started: 04/01	/2022	Surface Elev		587.37 ft amsl	Boring No.: TCS-2 Pilot				
ate Completed: 04/24		Northing (NA	-	2100921.24					
rilling Co.: <u>Casc</u>		Easting (NA	'	7615150.98		G&E			
	: Drilling	Total Depth:	-		•		V Remedy Pr		
• •	<u>: Longyear drill head</u> Arnold	Borehole Dia		<u>4-7 inches</u> 129.5 ft bgs		GAE I	opock, Need		
	eppner / R West	Sampling Me		4 inch x 10 ft. Core Barrel	Project Nur	nher: ?	30126255		
	Redner	Sampling Int		<u>Continuous</u>		noer. <u>c</u>	0120200		
	McGrane	Converted to		X Yes No	-				
(ff) (ff) (ff) (ff) (ff) Sample ID	Groundwater Sample ID O L	USCS Code USCS Class		Soil Description			Drilling Notes	Drilling Fluid	
41 42 43 44 45 46 46 46 48 49 50 50 51 52 52 53 54 55 56 57 58 5.6	Alluvium Deposits Groundwater Samples Collected Alluvium Deposits Alluvium Deposits Alluvium Deposits	SM SM	(41.7 ft) (41.7 ft) (52-57 ft) (	a the very coarse grained, subangular to subround; little small fular to subround; trace silt; trace clay; of Small cobble Small cobble 5 th) Silty sand with gravel (SM); brown coarse grained, subangular to subround; little silt; trace clay; difference of the subround; little silt; little silt; little silt; trace clay; difference of the subround; little silt; little silt; trace clay; difference of the subround; little silt; little silt; little silt; trace clay; difference of the subround; little silt; little silt; trace clay; difference of the subround; little clay; trace grained, subangular to subround; little silt; little silt; trace clay; difference of the subround; little clay; trace grained, subangular to subround; little clay; trace difference of the subround; trace clay; d	(10YR 5/3); very (10YR 5/3); very d; little small to v les, subangular ); brown (10YR 5/2 e grained, large pebbles, angular to subr	) ound; ); e silt; is,	(47.0 - 57.0') Rough drilling (57.0 - 64.5') Rough and hard drilling	(47.0 - 57.0') No drilling fluid used (57.0 - 64.5') No drilling fluid used	
	W = groundwater, ppb =	= parts per bill	ion, Note	s = below ground surface, ams s: Solid blue and hollow blue v ng the first VAS interval, respe	vater table m	arks re	present depth	to water (ft	

ARCADIS Date Started: 04/01/2022					pring	j Log	Sheet: 4 of 12				
				Surfac			Boring No.	: TCS-2 P	ilot		
Date Comp				Northin		-	_				
Drilling Co.:				Easting			Client: <u>PG&amp;E</u>				
Drilling Meth Drill Rig Typ		nic Drilling art Longyear dr		Total D Boreho	•	232 ft bgs neter: <u>4-7 inches</u>	Project: <u>Final G</u> Location: <u>PG&amp;E</u>	W Remedy Pl			
Driller Name		tt Arnold	III Heau			Water: 129.5 ft bgs	LUCATION. <u>FG&amp;E</u>	TOPOCK, NEED			
Drilling Asst		loeppner / R V	/est	Sampli		•	Project Number:	30126255			
.ogger:		n Redner		Sampli	-			00.20200			
Editor:		an McGrane		Conve	-		-				
Depth (ft) (ft) Recovery (ft)	Sieve Sample	Groundwate		USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid		
_61 _62 _ 5.6			Alluvium Deposits	SM		(57-63 ft) Silty sand with gravel (SM); gravish t very fine to very coarse grained, subangular to little small to large pebbles, angular to subrour angular to subround; trace clay; dry; silt and cl unit. (62-63 ft) Boulder; pulverized by drilling proces	ar to subround; some silt; round; trace granules, d clay nodules within				
_63 _ _64			Alluvium Deposits	SM		(63-64.5 ft) Silty sand with gravel (SM); gravish with brown (7.5YR 5/2); very fine to fine graine very coarse grained, subangular to subround; to medium pebbles, angular to subround; little angular to subround; dry.	ed, little medium to some silt; little small				
_65 _66 _67 _68			Alluvium Deposits	SW-SM		(64.5-68.5 ft) Well graded sand with silt and g brown (10YR 5/3); very fine to very coarse gra bround; little small to very large pebbles, angu little silt; tracegranules, angular to subangular;	ined, angular to su lar to subangular;	(64.5 - 77.0') Rough drilling	(64.5 - 77.0' No drilling flu used		
_69	No Sieve	No Groundwatei	Alluvium Deposits	SM		(68,5-69.5 ft) Silty sand with gravel (SM); brow brown (7.5YR 5/3); very fine to very coarse gra subround; little silt; little small to very large pet subangular; trace granules, angular to subang moist; silt and clay nodules with in unit.	ined, angular to bles, angular to				
.709.5 9.5 72 73	Samples Collected	Somplos	Alluvium Deposits	SW-SM		(69.5-77 ft) Well graded sand with silt and gra (10YR 5/3) with brown (7.5YR 5/3); very fine to angular to subround; little small to very large p subangular; little silt; trace granules, angular to clay; dry to moist; silt and clay nodules within to	ebbles, angular to subangular; trace				
74 75 76 77						(75.5-76.5 ft) Cobbles/boulder pulverized by d	rilling process.				
.77 _78 _79 _80			Alluvium Deposits	SW-SM		(77-83 ft) Well graded sand with silt and grave brown (10YR 5/2) with brown (7.5YR 5/2); very grained, angular to subround; little small to ver angular to subangular; little silt; trace granules subangular; trace clay; dry to moist; silt and cla unit.	y fine to very coarse y large pebbles, , angular to	(77.0 - 87.0') Rough drilling	(77.0 - 87.0 No drilling flu used		
bbreviation	ns: USCS	= Unified Soil	Classification	n Syste	m, ft =	feet, bgs = below ground surface, am	sl = above mean se	ea level, NR =	No Recove		
I/A = Not A	pplicable,	GW = ground	water, ppb =	parts p	er billic	n, Notes: Solid blue and hollow blue v	vater table marks r	epresent depth	n to water (f		
						ed during the first VAS interval, respe					
	antial aam	paction of sed	ments in the	core h	an						

	ARCADIS Started: 04/01/2022					J Log	Sheet: 5 of 12				
ate Started:				Surface			Boring No.: TCS-2 Pilot				
ate Completed				Northin	•						
rilling Co.:	<u>Casca</u>			Easting		,	Client: <u>PG&amp;E</u>				
rilling Method:				Total D	epth:	232 ft bgs		W Remedy Pl			
rill Rig Type:	<u>Boart</u>	Longyear drill	head I	Boreho	le Diar	neter: <u>4-7 inches</u>	_ Location: PG&E	Topock, Need	les Californ		
Driller Name:         Matt Arnold           Drilling Asst:         D Hoeppner / R West					to First	Water: 129.5 ft bgs					
					ng Met	hod: <u>4 inch x 10 ft. Core Barrel</u>	Project Number:	30126255			
ogger:	<u>Ellen F</u>	Redner	;	Sampli	ng Inte	rval: <u>Continuous</u>	_				
ditor:	<u>Sean l</u>	McGrane	(	Conver	ted to	Well: 🛛 Yes 🗌 No					
Lepth (ft) (ft) (ft) (ft)	Sieve ample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid		
.81 .82			Alluvium Deposits	SW-SM		<ul> <li>(77-83 ft) Well graded sand with silt and grave brown (10YR 5/2) with brown (7.5YR 5/2); ver grained, angular to subround; little small to ve angular to subangular; little silt; trace granules subangular; trace clay; dry to moist; silt and cl unit.</li> <li>(82-83 ft) Small cobbles pulverized by drilling</li> </ul>	y fine to very coarse ry large pebbles, , angular to ay nodules within				
83 - 7.1 84 85			Alluvium Deposits	SM		(83-85.5 ft) Silty sand with gravel (SM); gravisl with brown (7.5YR 5/2); very fine to very coars subround; little small to very large pebbles, an little silt; trace granules, angular to subangula moist; silt and clay nodules within unit.	e grained, angular to gular to subangular;				
.86			Alluvium Deposits	ML		(85.5-87 ft) Sandy silt with gravel (ML); brown plasticity, rapid dilatancy; some clay; little very grained sand, angular to subround; little small angular to subangular; trace granules, angula medium stiff to hard; dry.	fine to very coarse to large pebbles, to subangular;				
88			Alluvium Deposits	SM		(87-89 ft) Silty sand with gravel (SM); grayish l with brown (7,5YR 5/2); very fine to very coars subround; little small to very large pebbles, an little silt; trace granules, angular to subangula moist; silt and clay nodules within unit.	e grained, angular to gular to subangular;	(87.0 - 97.0') Rough drilling	(87.0 - 97.0 No drilling flu used		
.90S	o Sieve amples ollected	No Groundwater Samples Collected				(89-96 ft) Well graded sand with silt and grave brown (10YR 5/2) with brown (7.5YR 5/2); ver grained, angular to subround; little small to ve angular to subangular; little silt; trace granules subangular; trace clay; dry to moist; silt and cl unit.	/ fine to very coarse ry large pebbles, angular to				
928.2 93 94 95			Alluvium Deposits	SW-SM		(93.6 ft) Boulder/cobble pulverized by drilling p (94.2-94.4 ft) Silt lens	process.				
96  97			Alluvium Deposits	ML		(96-97 ft) Sandy silt (ML); brown (10YR 5/3); I dilatancy; some very fine to fine grained sand, coarse grained sand, angular to subround; litt granules, angular to subangular; trace small to	little medium to very e clay; trace	(07.0	(07.0.107.0		
98_ - 7.3 99_			Alluvium Deposits	SW		(197-99.5 ft) Well graded sand with gravel (SW (107R 5/2) with brown (7.5YR 5/2); very fine to angular to subround; little small to very large p subangular; trace granules, angular to subang clay; dry to moist; silt and clay nodules within	y. ); grayish brown o very coarse grained, ebbles, angular to ular; trace silt; trace	(97.0 - 107.0') Rough drilling	(97.0 - 107. No drilling flu used		
100			Alluvium	SM		(99.5-100 ft) Silty sand with gravel (SM); grayi	sh brown (10YR 5/2);				
100	ISCS - I	Unified Soil CI	assification	-	n ft –	eet, bgs = below ground surface, am	sl = above mean se	a level NR – I	No Recove		
						n, Notes: Solid blue and hollow blue v					
A = NOLAPPIIC	-	<u> </u>				ed during the first VAS interval, respe		• •			
				WOtor P							

ate Started:						Lο	-					
	<u>04/01/</u>				e Elevati		587.37 ft an		Borin	g No.:	TCS-2 P	ilot
ate Complete					g (NAD		2100921.24		_			
rilling Co.:	<u>Casca</u>			-	) (NAD8	3):	7615150.98	}	_ Client:	PG&E		
rilling Method				Total D	•		232 ft bgs		-		<u>N Remedy Pl</u>	
orill Rig Type:		<u>_ongyear drill</u>			le Diam		<u>4-7 inches</u>		_ Location:	PG&E I	Fopock, Need	les Californi
viller Name:	Matt A			•			<u>129.5 ft bgs</u>	ft. Core Barrel	– Draia at N		20400055	
orilling Asst:		ppner / R We Redner			ng Meth ng Interv				_ Project N	umber.	30120200	
ogger: ditor:		VcGrane			ted to W		Continuous	No	-			
	<u>Ocarri</u>					/ Сп.						
Depth (ft) Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	Class			Soil Description	h an an an 1944 a s		Drilling Notes	Drilling Fluid
			Alluvium Deposits	sw		very larg angular unit. (100-102 5/2) with	e pebbles, angu to subangular; tr 2.5 ft) Well grade grayish brown (	grained, angular to su lar to subangular; littl race clay; dry; silt and ed sand with gravel (S (10YR 5/2); very fine t e small to very large p	e silt; trace gra clay nodules SW); brown (7. o very coarse	anules, within 5YR grained,		
103 - 7.3 104 - 105 - 106 - 107			Alluvium Deposits	SM		clay; dry (102.5-1 grayish t to subro subangu clay; dry	to moist; silt and 07 ft) Silty sand prown (10YR 5/2 und; little small t ular; little silt; trad	les, angular to subang d clay nodules within with gravel (SM); bro 2); very fine to very co: to very large pebbles, ce granules, angular t dules within unit.	unit. wn (7.5YR 5/2) arse grained, a angular to	) with angular		
108_ 	No Sieve Samples Collected	No Groundwater Samples Collected	Alluvium Deposits	SM		grayish b to subro subangu	prown (10YR 5/2 und; little silt; litt	ith gravel (SM); brown 2); very fine to very co le small to large pebb les, angular to subrou nin unit.	arse grained, a les, angular to	angular	(107.0 - 117.0') Rough drilling, stopped drilling for day on 4/15/22 due to moist core and potential for water table to be close for first VAS collection.	(107.0 - 117.0') No drilling flui used
-112_7.6 -113_ 113_ 114_ 115_ 116_			Alluvium Deposits	SM	t t	grayish t to subro subroun	prown (10YR 5/2 und; some silt; li d; trace granules	with gravel (SM); bro 2); very fine to very co- ittle small to large pet s, subangular to subr les and lens within un	arse grained, a bles, angular bund; trace cla	angular to		
,			Alluvium	SM				with gravel (SM); brow		; very		
117			Deposits		f f f	fine to fir	ne grained, little	medium to very coars some silt; little small	se grained,		(117.0 -	(117.0 -
- 118_ - 3.5 119_ -			Alluvium Deposits	SM		angular subroun (117-122 grayish t to subro little silt;	to subangular; li d; moist; rapid d 2 ft) Silty sand w prown (10YR 5/2 und; little small t trace granules, bbles, subround	ttle clay, trace granule	es, angular to n (7.5YR 5/2) v arse grained, a angular to sub nd; trace clay;	vith angular pround; trace	122.0') Rough drilling	122.0') No drilling flu used
120		Inified Soil Cl	assification	   Sveter	<u> ∴ ∴ ` </u> n ft – fo	et ha	s = below arc	ound surface, am	sl = ahove r	nean se	 a level NR – I	
								and hollow blue				
		<u> </u>		· ·				AS interval, respe			· · ·	
			$\alpha \alpha \omega \alpha \alpha$	waterr				a sinuanyai racha	LIVEN AND	LALIANT DO		s can ne th

AR	CAD					J Log	SI	neet: 7 of	12
ate Started:		1/2022		Surface			Boring No.	: <u>TCS-2</u> P	<u>ilot</u>
ate Comple				Northin		-	-		
rilling Co.:	<u>Casc</u>			Easting			Client: <u>PG&amp;E</u>		
rilling Metho		<u>c Drilling</u>		Total D	•	232 ft bgs	•	W Remedy Pl	
rill Rig Type riller Name:		<u>t Longyear drill</u> Arnold		Boreho		neter: <u>4-7 inches</u> Water: 129.5 ft bgs	Location: PG&E	TOPOCK, Need	les Callon
rilling Asst:		eppner / R We		Sampli			Project Number:	20126255	
bgger:		Redner		Sampli	-			30120233	
ditor:		McGrane		Convei	-		-		
	<u></u>								
Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Flui
_  21 <u>3.5</u>			Alluvium Deposits	SM		(117.5-119.5 ft) Dry to moist (119.5-120.5 ft) Moist (120.5-121.5 ft) Dry to moist (121.5-122 ft) Moist			
122									
- 123_ - 124_	No Sieve Samples Collected		Alluvium Deposits	SM		(122-126.5 ft) Silty sand with gravel (SM); brow fine to very coarse grained, angular to subrour large pebbles, angular to subround; little silt; tr subangular to subround; trace clay; trace smal dry to moist; silt and clay nodules and lens with	d; little small to very ace granules, I cobbles, subround;	(122.0 - 127.0') Normal drilling	(122.0 - 127.0') No drilling flu used
- 3.5 25 26 27		No Groundwater Samples Collected				(125-125.5 ft) Moist (125.5-126 ft) Dry to moist (126-126.5 ft) Moist (126.5-134 ft) Silty sand with gravel (SM); brow			
27 28 29 - 3.6	TCS-2-SS- 126.5-131 4/25/2022 09:00	No Sample (127-132 Interval did				fine to very coarse grained, angular to subrour large pebbles, angular to subround; little silt; tr subangular to subround; trace clay; moist to w nodules and lens within unit. (129.5-134 ft) Wet	ace granules,	(127.0 - 132.0') Normal drilling	(127.0 - 132.0') No drilling flu used
30 31 32	TCS-2-SS-	not produce) 4/19/2022	Alluvium Deposits	SM		(123.5-134 II) Wel		<b>₽</b>	
33 34	131-134 4/25/2022 09:05	TCS-2-VAS- 131-136 (4300 ppb) 4/19/2022 15:10				(134-137 ft) Silty sand with gravel (SM); brown	(7.5YR 5/3): verv	(132.0 - 137.0') Normal drilling	(132.0 - 137.0') No drilling flu used
- 4.5 35_ - 36_	TCS-2-SS-		Alluvium Deposits	SM		fine to very coarse grained, angular to subrour large pebbles, angular to subround; little silt; tr subangular to subround; trace clay; dry to mois nodules and lens within unit. (135.5 ft) Moist	id; little small to very ace granules,		
37	1005-2-005- 134-139.5 4/25/2022 09:10					(137-139.5 ft) Silty sand with gravel (SM); yello 5/4); very fine to very coarse grained, angular little small to very large pebbles, angular to sul	o subround; little silt; pround; little clay;	(137.0 - 147.0') Rough drilling	(137.0 - 147.0') No drilling flu
38_ - 8 39_			Alluvium Deposits	SM		trace granules, subangular to subround; dry to nodules and lens within unit. (139 ft) Moist			useď
40			Alluvium	SM					
	: USCS =	Unified Soil C	assificatior	n Syster	n, ft =	eet, bgs = below ground surface, ams	sl = above mean s	ea level, NR = l	No Recove
						n, Notes: Solid blue and hollow blue v			
				· ·		ed during the first VAS interval, respe		· · ·	
,		action of sedim	•			5	2 II F		

	AK	RCAD					g Log	St	neet: 8 of	12
	tarted:				Surface			Boring No.	: <u>TCS</u> -2 P	ilot
	omple				Northin		-			
rilling		Casca			Easting		,	Client: PG&E		
	Metho		Drilling		Total D	•	<u>232 ft bgs</u>	-	W Remedy P	
-	д Туре		Longyear drill		Boreho			Location: PG&E	Topock, Need	lles Californ
	Name:				•		Water: <u>129.5 ft bgs</u>		20120255	
•	Asst:		eppner / R We		Sampli	0		Project Number:	30126255	
ogger ditor:	•		Redner McGrane		Sampli Conver	-		-		
		Sean								
(ft)	Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geol	USCS Code	LSCS Class	Soil Description	(	Drilling Notes	Drilling Flui
_ _141 _ _142		TCS-2-SS-		Deposits Alluvium Deposits	SM		(139.5-142 ft) Silty sand with gravel (SM); brow fine to very coarse grained, angular to subrour large pebbles, angular to subround; little silt; tr subangular to subround; trace clay; dry to mois nodules and lens within unit. (140 ft) Moist	nd; little small to very ace granules,		
142 143 144	8	139.5-144.5 4/25/2022 09:15		Alluvium Deposits	SW-SM		(142-144.5 ft) Well graded sand with silt and g brown (10YR 5/3); very fine to very coarse grai subround; little small to very large pebbles, and little silt; trace granules, angular to subangular silt and clay nodules and lens within unit. (143-144.5 ft) Moist	ned, angular to gular to subangular;		
- 145				Alluvium Deposits	SM		(144.5-145.5 ft) Silty sand with gravel (SM); br brown (7.5YR 5/3); very fine to very coarse gra subround; little silt; little small to very large pet	ined, angular to bles, angular to		
146 _ 147 148		TCS-2-SS- 144.5-148.5 4/25/2022 09:20		Alluvium Deposits	SM		subangular; little clay; trace granules, angular silt and clay nodules and lens within unit. (145.5-148.5 ft) Silty sand with gravel (SM); ye 5/4) with brown (7.5YR 5/4); very fine to very cr angular to subround; little small to large pebble subangular; little silt; trace granules, angular to clay; wet; silt and clay nodules and lens within (147 ft) Color change to brown (10YR 5/3) with	llowish brown (10YR parse grained, es, angular to o subangular; trace unit.	(147.0 - 152.0') Normal drilling	(147.0 - 152.0') No drilling fl used
-  49  50	3.8	TCS-2-SS- 148.5-153	TCS-2-VAS- 147-152 (<0.025 ppb) 4/20/2022 11:15	Alluvium Deposits	SM		(148.5-150 ft) Silty sand with gravel (SM); brow brown (10YR 5/3) very fine to very coarse grai subround; some silt; little small to very large po- subangular; little clay; trace granules, angular silt and clay nodules and lens within unit. (150-151.5 ft) Silty sand with gravel (SM); brow brown (10YR 5/3) very fine to very coarse grai	ned, angular to ebbles, angular to to subangular; wet; wn (7.5YR 5/3); with		
151		148.5-153 4/25/2022 09:25		Alluvium Deposits	SM		subround; some silt; little small to very large p subangular; trace granules, angular to subang silt and clay nodules and lens within unit.	ebbles, angular to		
152				Alluvium Deposits	SM		(151.5-152 ft) Silty sand with gravel (SM); brow brown (7.5YR 5/3); very fine to very coarse gra			
- 153_ 154_ 155_ 156_ - 157_	12	TCS-2-SS- 153-158 4/25/2022 09:30		Alluvium Deposits	SM		blown (7.5 rK 5/3), Very line to Very Coarse gra subround; little small to large pebbles, angular silt; trace granules, angular to subangular; trac clay nodules and lens within unit. (152-158 ft) Silty sand with gravel (SM); brown brown (7.5YR 5/3); very fine to fine grained, lit coarse grained, angular to subround; some sil pebbles, angular to subangular; little clay; trac to subangular; moist to wet; rapid dilatancy; sil and lens with in unit. (152-153 ft) Wet (153-154 ft) Moist to wet (156-158 ft) Moist to wet	to subangular; little e clay; wet; silt and (10YR 5/3); with the medium to very t; little small to large e granules, angular	(152.0 - 157.0') Rough drilling	(152.0 - 157.0') No drilling flu used
58_  58_  59_  60				Alluvium Deposits	SM		(158-160 ft) Silty sand with gravel (SM); brown brown (7.5YR 5/3); very fine to very coarse gra subround; some silt; little small to very large pe subangular; little clay; little granules, angular to small cobble, subangular; wet; rapid dilatancy; and lens within unit. (159-159.5 ft) Moist to Wet	ined, angular to abbles, angular to b subangular; trace	(157.0 - 159.0') Very hard drilling (159.0 - 167.0') hard drilling	(157.0 - 159.0') No drilling fl used (159.0 - 167.0') No drilling fl
	viations	s: USCS =	Unified Soil C	lassification	n Syster	n, ft =	feet, bgs = below ground surface, ams	sl = above mean s	ea level, NR =	No Recove
							on, Notes: Solid blue and hollow blue v			
		•	<u> </u>		· ·		red during the first VAS interval, respe		· · ·	
			ction of sedim					σανοίχι πρρατεπι μ		

9	<u> </u>	<u>ecae</u>	<u> </u>		BC	oring	g Lo			heet: 9 of	12
	started		)1/2022		Surface			587.37 ft amsl	– Borina No	.: <u>TCS-2 P</u>	ilot
	•	eted: 04/2			Northin		-	2100921.24			
-	Co.:		cade		Easting		83):	7615150.98	Client: PG&E		
-	Metho		<u>ic Drilling</u> rt Longyear drill		Total D Borehc	•	motor:	232 ft bgs 4-7 inches	Project: <u>Final (</u> Location: <u>PG&amp;E</u>	<u>GW Remedy Pł</u>	
	g Type Name:		t Arnold					<u>4-7 incries</u> 129.5 ft bgs	_ Location. <u>FGac</u>	TOPOCK, Need	
	Asst:		oeppner / R We		Sampli			4 inch x 10 ft. Core Barrel	Project Number	30126255	
ogge			n Redner		Sampli	•		Continuous		00120200	
ditor:			n McGrane		Conver	-		X Yes No			
Depth (ft)	Recovery (ft)	Sieve Sample I	Groundwater D Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description		Drilling Notes	Drilling Fluic
_ _161 _162 _ _163		TCS-2-SS 158-163.5 4/25/2022 09:35		Alluvium Deposits	ML		(160-16 plasticity sand, ar angular subangu rapid dil	60 ft) Wet 3.5 ft) Sandy silt with gravel (ML); bro y, rapid dilatancy; some very fine to v ngular to subround; little small to very to subangular; little clay; little granul ilar; trace small cobbles, subangular atancy; silt and clay nodules and len 63.5 ft) Wet	very coarse grained y large pebbles, es, angular to r; soft; moist to wet;		used
_ 164	12		— TCS-2-VAS- 161.5-166.5 (<0.025 ppb) 4/21/2022	Alluvium Deposits	SM		fine to v small to	64.5 ft) Silty sand with gravel (SM); I ery coarse grained, angular to subro large pebbles, angular to subround;	und; some silt; little little granules, angular		
- 165 - 166 -		TCS-2-SS 163.5-167 4/25/2022 09:40		Alluvium Deposits	ML		unit. (164.5-1 plasticity sand, ai subroun medium (165.5-1	ngular; little clay; wet; silt and clay no 67 ft) Sandy silt with gravel (ML); bro , rapid dilatancy; some very fine to v gular to subround; little small to larg d; little granules, angular to subang stiff; wet; silt and clay nodules and I 68.8 ft) Silty sand lens (SM); very fin	own (7.5YR 5/3); low very coarse grained ge pebbles, angular to ular; little clay; soft to ens within unit. ne to very coarse		
167  168			-	Alluvium Deposits	SM		pebbles (166.5 fr (167-16	angular to surround; little silt; little c subangular. ) Color change to reddish brown (5Y 8 ft) Silty sand with gravel (SM); brow	/R 5/4). vn (7.5YR 4/3); very	(167.0 - 177.0') Normal drilling	(167.0 - 177.0') No drilling flu
	7.4	TCS-2-SS 167-172.5 4/25/2022 09:45		Alluvium Deposits	ML		fine to v small to granules lens with (168-17 medium grained angular	ery coarse grained, angular to subro large pebbles, angular to subround; s, angular to subangular; moist; silt a in unit. 2.5 ft) Sandy silt with gravel (ML); bro plasticity, rapid dilatancy; some very sand, angular to subround; little sma to subround; little granules, angular to medium stiff; moist; silt and clay	und; some silt; little little clay; trace and clay nodules and own (7.5YR 5/3); low to y fine to very coarse all to large pebbles, to subangular; little		used
_ - 174_ 175_ 176_ -		TCS-2-SS 172.5-179 4/25/2022 09:50		Alluvium Deposits	 SM		4/2); vei little gra	77 ft) Silty sand with gravel (SM); da y fine to very coarse grained, angula nules, angular to subangular; trace s to subround; trace clay; wet; silt and hit.	ar to subround; little silt; small to large pebbles,		
 _178  _179	7.7			Alluvium Deposits	SW-SM		reddish subroun small to silt and	9 ft) Well graded sand with silt and g gray (5YR 4/2); very fine to very coar d; little granules, angular to subangu large pebbles, angular to subround; clay nodules within unit.	se grained, angular to Jlar; little silt; trace trace clay; wet; trace	(177.0 - 187.0') Normal drilling	(177.0 - 187.0') No drilling flu used
_ 180	• .•			Alluvium Deposits	SM		little sm	0 ft) Silty sand with gravel (SM); redo to very coarse grained, angular to s all to large pebbles, angular to subro	subround; some silt; ound; little clay; trace		
								s = below ground surface, ar			
					<u> </u>			s: Solid blue and hollow blue			
ys.) f	nst ent		paction of sedim				ieu dufi	ng the first VAS interval, resp	ectively. Apparent	artial recoverie	s can be tr

		CAD					g Log		eet: 10 of	12
	tarted				Surface			Boring No.	: TCS-2 P	ilot
	Comple				Northin		-	_		
-	Co.:	Casca			Easting			Client: PG&E		
-	Metho		Drilling		Total D	•	232 ft bgs		W Remedy Pl	
	g Туре		Longyear drill		Boreho			Location: PG&E	lopock, Need	les Califorr
	Name:						Water: <u>129.5 ft bgs</u>		00400055	
•	Asst:		eppner / R We		Sampli	•		Project Number:	30126255	
oggei			Redner		Sampli	-		-		
ditor:		<u>Sean</u>	McGrane	-	Convei					
(ft) (ft)	Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Flui
_		700 0 00					granules, angular to subangular; wet; rapid dil nodules within unit.	atancy; silt and clay		
181		TCS-2-SS- 179-182		Alluvium	SW-SM		(180-182 ft) Well graded sand with silt and gra reddish brown (5YR 4/3); very fine to very coar			
_		4/25/2022 09:55		Deposits			to subround; little granules, angular to subang	ular; little silt; trace		
182							small to large pebbles, angular to subround; tr	ace clay; wet; trace		
_				Alluvium			(182-183.5 ft) Sandy silt with gravel (ML); redc low to medium plasticity, rapid dilatancy; little			
183_		TCS-2-SS- 182-184.5	TCS-2-VAS-	Deposits	ML		coarse grained sand, angular to subround; littl	e small to large		
_	7.7	4/25/2022	181-186 (<0.025 ppb)				pebbles, angular to subround; little clay; trace subangular; soft; wet.	granules, angular to		
184		10:00	4/21/2022 14:45	Alluvium	SM		(183.5-184.5 ft) Silty sand with gravel (SM); re 4/3); very fine to very coarse grained, angular			
_				Deposits Alluvium			little granules, angular to subangular; trace sm	all to large pebbles,		
185				Deposits	SM		angular to subround; trace clay; wet; trace silt within unit.	and clay nodules		
_							(184.5-185 ft) Silty sand with gravel (SM); brow			
186				Alluvium	SM		fine to very coarse grained, angular to subrour small to large pebbles, angular to subround; li	ttle granules, angular		
_				Deposits			to subangular; trace clay; soft; wet; rapid dilata (185-187 ft) Silty sand with gravel (SM); brown			
187		TCS-2-SS- 184.5-190					fine to very coarse grained, subangular to sub	round; little silt; little	(407.0	(107.0
_		4/25/2022		Alluvium	SM		granules, angular to subangular; trace small to angular to subround; trace clay; wet; silt and c	lay nodules within	(187.0 - 197.0')	(187.0 - 197.0')
188_		10:05		Deposits	_		unit; NOTE: Silt and clay observed to be conce along the outer edges of the core sample.	entrated located	Normal drilling	No drilling fl used
_							(187-188 ft) Silty sand with gravel (SM); brown			
189				Alluvium	SM		fine to very coarse grained, angular to subrour small to very large pebbles, subangular to sub	round: little clav:		
_				Deposits			trace granules, angular to subround; soft; wet; (188-190 ft) Silty sand with gravel (SM); brown			
190							fine to very coarse grained, subangular to sub	round; little small to		
_							very large pebbles, subangular to subround; ling granules, subangular to subround; trace clay;	wet; silt and clay		
191	7.4			Alluvium	SM		nodules within unit; NOTE: Silt and clay obser concentrated located along the outer edges of			
_				Deposits			(190-192 ft) Silty sand with gravel (SM); brown	(7.5YR 5/3); very		
192							fine to very coarse grained, angular to subrour small to very large pebbles, subangular to sub			
_		TCS-2-SS-					trace granules, angular to subround; soft; wet;			
193_		190-196					(192-195 ft) Silty sand with gravel (SM); brown fine to very coarse grained, angular to subrour	nd; some silt; little		
_		4/25/2022 10:10		Alluvium Deposits	SM		small to very large pebbles, subangular to sub trace granules, angular to subround; soft; wet;			
194				Deposits						
_										
195							(105 106 ft) Silty agod with group (SM); brown	(7 EVP E/2): yon/		
_				Alluvium Deposits	SM		(195-196 ft) Silty sand with gravel (SM); brown fine to very coarse grained, angular to subrour	nd; some silt; little		
196							small to very large pebbles, subangular to sub trace granules, angular to subround; soft; wet;			
-				Alluvium Deposits	SM		(196-197 ft) Silty sand with gravel (SM); brown fine to very coarse grained, angular to subrour	(7.5YR 4/4); very		
197		TCS-2-SS-		Depusits			small to very large pebbles, subangular to sub	round; little clay;	(197.0 -	(197.0 -
-	8.6	196-199 4/25/2022					trace granules, angular to subround; soft; wet; (197-199 ft) Sandy silt with gravel (ML); brown		207.0')	207.0')
198		10:15		Alluvium Deposits	ML		plasticity, rapid dilatancy; some very fine to very sand, angular to subround; little small to very l	ry coarse grained	Normal drilling	No drilling fl used
-							subangular to subround; little clay; trace granu	iles, subangular to		
199_							subround; soft; wet.			
-				Alluvium Deposits	SM					
200	int:			•			foot has holder many holder	al above e		
							feet, bgs = below ground surface, ams			
		•	<u> </u>		· ·		on, Notes: Solid blue and hollow blue v red during the first VAS interval, respe		· · ·	
is.) Il	ist elle		ction of sedim	•			ieu uuning me mst vAS mervai, respe	cuvely. Apparent p	artial recoverie	s can be t

ate Sta ate Cor	arted:	0.4/0				-				
ate Cor			1/2022		Surface			- Boring No.	: <u>TCS-2</u> P	<u>ilot</u>
	•	ted: <u>04/24</u>			Northin		-	_		
illing C		<u>Case</u>			Easting		-	_ Client: <u>PG&amp;E</u>		2000 2 4
illing Ⅳ ill Rig <sup>-</sup>			<u>c Drilling</u> t Longyear dril		Total D Borehc	•	232 ft bgs neter: <u>4-7 inches</u>	Project: <u>Final C</u> Location: <u>PG&amp;E</u>	W Remedy Pr	
iller Na			Arnold				Water: 129.5 ft bgs		TOPOCK, NEEU	
illing A		-	eppner / R W		Sampli			Project Number:	30126255	
gger:			Redner		Sampli	0			00.20200	
litor:			McGrane		Convei	•		_		
(ft) Recovery	Kecovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Flu
01				Alluvium Deposits	SM		(199-202 ft) Silty sand with gravel (SM); brow fine to very coarse grained, angular to subro small to very large pebbles, subangular to su trace granules, angular to subround; soft; we	und; some silt; little ibround; little clay;		
02		TCS-2-SS-		Alluvium	SM		(202-202.5 ft) Silty sand with gravel (SM); br			
03_ - { 04_ 05_	8.6	199-205 4/25/2022 10:20	TCS-2-VAS- 202-207 (2300 ppb) 4/22/2022 11:50	<u>Deposits</u>			fine to very coarse grained, angular to subro small to very large pebbles, subangular to su angular to subround; trace clay; wet; rapid d (202.5-210 ft) Silty sand with gravel (SM); br fine to very coarse grained, angular to subro small to very large pebbles, subangular to su angular to subround; little clay; soft; wet; rap Majority of silt and clay observed in large not	ibround; little granules, latancy. own (7.5YR 4/4); very und; some silt, little ibround; little granules, id dilatancy; NOTE:		
)6  )7		TCS-2-SS-		Alluvium Deposits	SM				(207.0 -	(207.0 -
- )8_ - )9_ - 10_		205-210 4/25/2022 10:25							217.0') Normal drilling	217.0') No drilling f used
- 11	8			Alluvium Deposits	SM		(210-214 ft) Silty sand with gravel (SM); redo very fine to very coarse grained, angular to s little small to very large pebbles, subangular granules, subangular to subround; trace clay subangular; wet; rapid dilatancy.	ubround; some silt; to subround; little		
- 13_ - 14_		TCS-2-SS- 210-216.5 4/25/2022 10:30	TCS-2-VAS- 211.5-216.5 (120 ppb) 4/23/2022				(214-216.5 ft) Silty sand with gravel (SM); re	ddish brown (5YR 4/4);		
- 15_ 16_			4/ <i>23/2022</i> 09:00	Alluvium Deposits	SM		very fine to very coarse grained, angular to s little small to very large pebbles, subangular granules, angular to subround; trace clay; sc NOTE: Majority of silt and clay observed in la	ubround; some silt; to subround; little ft; wet; rapid dilatancy;		
17	ŀ			Alluvium	ML	ŧΫΫ	(216.5-217 ft) Gravelly silt with sand (ML); re	ddish brown (5YR 4/4);		
17 _ 18		TCS-2-SS- 216.5-219.5 4/25/2022		Alluvium	SM		no plasticity, rapid dilatancy; some small to v subangular to subround; little very fine to ver subangular to subround; little clay; trace gran subround; soft; wet.	ery large pebbles, y coarse grained sand, nules, subangular to	(217.0 - 224.0') Normal drilling	(217.0 - 224.0') No drilling f used
- 1 19_	12.3	4/25/2022 10:35		Alluvium	ML		(217-219 ft) Silty sand with gravel (SM); dark 4/2); very fine to very coarse grained, angula silt; little small to very large pebbles, subang granules, subangular to subround; little clay;	r to subround; some ular to subround; little wet; rapid dilatancy.		
20	ŀ			Deposits	SM		(219-219.5 ft) Sandy silt with gravel (ML); re no plasticity, rapid dilatancy; some very fine			
_0	ations	USCS =	Unified Soil C	lassification	-	m, ft = 1	i feet, bgs = below ground surface, an	nsl = above mean s	ea level, NR = I	No Recov
							on, Notes: Solid blue and hollow blue			
							red during the first VAS interval, resp			

te Startet: 04/01/2022 Surface Elevation: 587.27.11 ams! Boring No.: TCS-2 Pilot te Completed: 04/24/2022 Northing (NAD83): 2100921.24 TGS-24 Sance Easting (NAD83): 7515150.98 Client: PG&E Unit Remark Mark Arnold Depth to First Water: 122.5 fb.gs Uncoation: PG&E Topock. Needles Callor Uling Asst: D Hooppner / R West Sampling Interval: Continuous tor: Sean McGrane Converted to Welt: Sive No  TCS-2.93 TCS-24 TCS-25 TCS-24 TCS-24 TCS-25 TCS-24 TCS-24 TCS-25 TCS-24 TCS-25 TCS-24 TCS-25 TCS-24 TCS-24 TCS-25 TCS-24 TCS-24 TCS-24 TCS-25 TCS-24 TCS-2	9	AR	CAD	IS		Bc	oring	j Log		Sh	eet: 12 of	12
ling Co: Caesade Easing (NAD63): Z615150.88 Clear Easing (NAD64):									Borin	g No.	: <u>TCS-2 P</u>	ilot
ling Method: Sonic Drilling Total Depth: 222 ft bgs Craater E. Final GW Remedy Phase 24. Location: Califor E. Sonic Longvear drill head Borehole Diameter: 4-7 inches Location: Califor II: Califord J. Califor		•							Client:	PG&F		
III Rig Type: Boart Longyear drill head Borehole Diameter: 4-7 Inches Location: PG&E Topock, Needles Califor Matt Amold Dept to First Water: 129.5 ft bgs Dhapponer /R West Sampling Method: 4 inch x10 ft. Core Barrel project Number: 30126255 Diameter Sampling Method: 10 ft. Core Barrel Project Number: 30126255 Project Number: 3012655 Project Numbe	-					-					W Remedy P	hase 2A
Img Asst:       D. Hoeppnet / R. West       Sampling Method:       4 inch x 10 ft. Core Barrel       Project Number: 30126255         gger:       Ellen Redner       Sampling Interval:       Yes       No         Img Asst:       Bit Redner       Converted to Well:       Yes       No         Img Asst:       Bit Redner       Converted to Well:       Yes       No         Img Asst:       Bit Redner       Converted to Well:       Yes       No         Img Asst:       Bit Redner       Converted to Well:       Yes       No         Img Asst:       Sample ID       Groundwater down       Bit Redner       Dniling Notes       Dniling Notes       Dniling Notes         Img Asst:       TCS 2-385       TCS 2-385       Sampling Method:       Sam Asstanguiar to subcound: title day: the granules subanguiar to subcound: title day: the granules subanguiar to subcound: some day of the granules subanguiar to subcound: the day of the granules subanguiar to subcound: some day of the granules subangui							•	0	-		-	
gggr:       Ellen Redner       Sampling Interval:       Continuous         tor:       Saan McGrane       Converted to Well:       X Yes       No         Ellen Redner       Groundwater       Sample D       Sample D <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td> <td><u> </u></td> <td></td> <td></td>						•				<u> </u>		
Tor:     Sean McGrane     Converted to Well:     Yes     No       Image: State in the state of the	•					-	-		Project N	umber:	30126255	
Ber     Ber     Sample ID     Groundwater Sample ID     Ber     Ber <th< td=""><td>ditor:</td><td></td><td></td><td></td><td></td><td></td><td>•</td><td></td><td>-</td><td></td><td></td><td></td></th<>	ditor:						•		-			
21.     TCS-2-SS- 215.5223 10:30     Alluvium Deposits     SM     22.     23.     TCS-2-VAS- 215.5223 10:30     Alluvium Deposits     SM     23. </td <td>Depth (ft)</td> <td>Recovery (ft)</td> <td></td> <td></td> <td>Geologic Formation</td> <td>USCS Code</td> <td>USCS Class</td> <td>Soil Description</td> <td></td> <td></td> <td>Drilling Notes</td> <td>Drilling Fluid</td>	Depth (ft)	Recovery (ft)			Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
24	_ _221 _222  _223		219.5-223 4/25/2022	220-225 (<0.13 ppb) 4/22/2022	Alluvium	SM	X X X	subangular to subround; little clay; trace granu subround; soft; wet. (219.5-223 ft) Silty sand with gravel (SM); dark 4/2); very fine to very coarse grained, angular to silt; little clay; little granules, subangular to sub very large pebbles, subangular to subround; por rapid dilatancy. (223-227 ft) Sedimentary Rock; reddish brown	les, subangul reddish gray o subround; s round; little si porly sorted; v (5YR 5/4); fir	lar to (5YR some mall to vet;		
No Sisve Samples Collected 30 31 32 34 34 35 5 5 5 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1	_224 _225 _226				Bedrock -		× × × × × × × × × × × × × × × × × × ×			π	232.0') Very hard	No drilling flui
		12.3	Samples	Groundwater Samples	Bedrock -		*****	grained to coarse grained, angular; moderately hard; friable; pulverized by drilling process; dry	weathered:			
34_ - 35_ -	_							End of Boring at 232 ft bgs.				
37	233 234 235 236 237											
 39	_ 238_ _ 239_ _ 240											
to reviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Recover	240 \bbre\	viations	: USCS =	Unified Soil C	lassification	Syster	m, ft =	feet, bgs = below ground surface, ams	sl = above i	mean se	a level, NR =	No Recove
A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks represent depth to water			•	-							· · · · · ·	
s.) first encountered from logging and depth to water measured during the first VAS interval, respectively. Apparent partial recoveries can be t sult of potential compaction of sediments in the core bag.					-			red during the first VAS interval, respec	ctively. App	parent pa	artial recoverie	es can be th

ARC/	<b>ADIS</b>			Temporary	Backfil	l Log		Sheet: 1 of 12
Date Started:	04/24/2022			_ Surface Elevation:	<u>587.37 ft</u>	amsl	- Well ID: T	CS-2 Pilot
Date Completed:				_ Northing (NAD83):	<u>2100921.</u>			
0	Cascade			_ Easting (NAD83):	<u>7615150.</u>		Client: PG&	
•	<u>Sonic Drilling</u> Matt Arnold			_ Total Depth: _ Borehole Diameter:	<u>232 ft bgs</u> <u>4-7 inche</u> s		•	GW Remedy Phase 2A E Topock, Needles California
	D Hoeppner	/ R We	vet.	_ Depth to First Wate			Location. <u>PGa</u>	E TOPOCK, NEEDIES California
-	Ellen Redner		,51	_ Editor:	Sean Mc	-	Project Numbe	r: 30126255
					struction Details			
Groundwater	Geologic Formation	USCS Code	USCS Class				Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
 - 1	Fluvial Deposits	SW		(0.0 - 0.5') Steel plate		(0.0 - 28.0') 7" Diameter Borehole		Note: Steel plate used to mark pilot borehole
				(0.5 - 4.5') Cemex #60 (40x70) Lapis Lustre Sand			(0.5 - 4.5') 2.1 bags	(0.5 - 4.5') 3 bags (143%) Note: Surface sand seal, used >20% of the calculated volume due to potential voids that formed during drilling.
		NR		(4.5 - 5.0') Cemex #2/12 Mesh (12x20) Lapis Lustre Sand			(4.5 - 5.0') 0.5 bags	(4.5 - 5.0') 0.5 bags (100%) Note: Surface sand seal
Luby Constraint       6	Fluvial Deposits Fluvial Deposits	SP SM		(5.0 - 221.5') Cemex 8 Mesh (8x16) Lapis Lustre Sand			(5.0 - 221.5') 88.2 bags	(5.0 - 221.5') 98 bags (111%) Note: Backfill sand
N/A = Not Applicat	ole, GW = gro	oundwa	ater, ppb	= parts per billion, No	otes: Solid bl	ue and hollow blu	ie water table mark	sea level, NR = No Recovery, s represent depth to water (ft.
<u>,                                     </u>				to water measured du	iring the first	VAS interval, res	pectively. Granular	backfill material was removed
during overdrilling o	of the pilot bo	rehole	•					

9	ARC	ADIS			Temporary	Backfill Log	S	Sheet: 2 of 12
Date S		04/24/2022			_ Surface Elevation:	587.37 ft amsl	Well ID: T	CS-2 Pilot
	•	<u>04/27/2022</u>			_ Northing (NAD83):	2100921.24		
Drilling Drilling	Co.: Method:	Cascade Sonic Drilling	۰		_ Easting (NAD83): _ Total Depth:	7615150.98 232 ft bgs	Client: <u>PG&amp;E</u> Project: <u>Final</u>	= GW Remedy Phase 2A
Driller I		Matt Arnold	j		_ Borehole Diameter:	4-7 inches	-	E Topock, Needles California
Drilling		D Hoeppner	/RWe	est	_ Depth to First Water			
Logger	r:	Ellen Redner	r		_ Editor:	Sean McGrane	Project Number	: 30126255
Depth (ft)	Groundwate Sample ID		USCS Code	USCS Class	Const	truction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
21 21 2222 2222 2222 		Alluvium Deposits Alluvium Deposits Alluvium Deposits	SW SP ML					
	No Groundwater Samples Collected	Alluvium Deposits	SM		(5.0 - 221.5') Cemex 8 Mesh (8x16) Lapis Lustre Sand	(28.0 - 224.0') 6" Diameter Borehole	(5.0 - 221.5') 88.2 bags	(5.0 - 221.5') 98 bags (111%) Note: Backfill sand
		Alluvium Deposits	SW					
од — 32 <u>—</u>		Alluvium	SM					
		Deposits						
		Alluvium Deposits	SW-SC					
90501		Alluvium Deposits	SM					
		Alluvium	SW					
/E - AR(		Deposits						
		Alluvium Deposits	sw					
								sea level, NR = No Recovery,
								s represent depth to water (ft.
					to water measured dur	ing the first VAS interval, re	spectively. Granular b	backfill material was removed
puring	overarilling	of the pilot bo	161016	•				

9	ARC	ADIS			Temporary	Backfill Log	s	Sheet: 3 of 12
Date S		04/24/2022 04/27/2022			_ Surface Elevation: _ Northing (NAD83):	<u>587.37 ft amsl</u> 2100921.24	Well ID: T	CS-2 Pilot
Drilling	Co.:	Cascade			_ Easting (NAD83):	7615150.98	Client: PG&I	
Drilling Driller N	Method:	Sonic Drilling Matt Arnold			_ Total Depth: _ Borehole Diameter:	<u>232 ft bgs</u> 4-7 inches	•	GW Remedy Phase 2A E Topock, Needles California
Drilling		D Hoeppner	/ R We	st	_ Depth to First Water:			
Logger	:	Ellen Redner		, , ,	_ Editor:	Sean McGrane	Project Number	: <u>30126255</u>
Depth (ft)	Groundwate Sample ID		USCS Code	USCS Class	Const	ruction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
CINIL ELLESSO 2002 2002 000 2001 1/00/14 ELEVICE COL 1/00/14 ELEVI		Alluvium Deposits	SW					
48		Alluvium Deposits	SM					
4949 4949 5050 5151 5151	No Groundwater Samples Collected	Alluvium Deposits	sw		(5.0 - 221.5') Cernex 8 Mesh (8x16) Lapis Lustre Sand		(5.0 - 221.5') 88.2 bags	(5.0 - 221.5') 98 bags (111%) Note: Backfill sand
90000000000000000000000000000000000000		Alluvium Deposits	SM					
NUMENT LOG CIUDERRISKISMICGRANEION	iations: U	Alluvium Deposits SCS = Unified	SM Soil Cl	assificati	on System, ft = feet, bo	15 = below around surface a	amsl = above mean s	sea level, NR = No Recovery,
<sup>₩</sup> N/A = 1	Not Applica	able, GW = gro	oundwa	ater, ppb	= parts per billion, Not	tes: Solid blue and hollow bl	ue water table marks	s represent depth to water (ft.
Ų Ţ		tered from log of the pilot bo			to water measured dur	ing the first VAS interval, res	spectively. Granular l	backfill material was removed
Flanna								

Jate Startic:       0.40242022       Surface Evolution:       567.37.1 armini       Media         Data Completion:       Castada       Easting (NAD83)       2000000000000000000000000000000000000	9	ARC	ADIS			Temporary I	Backfill Log	S	Sheet: 4 of 12
Date Completed 04/27/2022 Nothing (NADB3): 210022.124 Drilling Co: Gacadab Drilling Method: Sonic Diffing. Broken (NADB3): 210022.124 Drilling Method: Sonic Diffing. Broken (NADB3): 210022.124 Drilling Nation: Description (NADB3): 210022.124 Drilling Method: Sonic Diffing. Broken (NADB3): 210022.124 Drilling Nation: Description (NADB3): 210022.23 Drilling Method: Sonic Diffing. Broken (NADB3): 210022.124 Drilling Nation: Description (NADB3): 210022.23 Drilling Nation: Description (NADB3): 210022.23 Drilling Nation: Description (NADB3): 210022.24 Drilling Nation: Description (NADB3): 210022.24 Drilling Nation: Description (NADB3): 210022.25 Drilling Nation: Description (NADB3): 210022.23 Drilling Nation: Description: Description (NADB3): 210022.23 Drilling Nation: Description: Description								Well ID: T	CS-2 Pilot
Inting Method:         Sonic Dating         Total Dept:         222 tbgs         Project:         End GM method:         Decret:         Find GM method:           Online Name         Diffee Namue         Diffee Namue		•							
Driller Name:         Matt Amode         Borehole Diameter         4.7 methes         Location: PG&E Eppock, Needlen Catifornia           orgger         Ellen Redner         Editor:         Stan McGrane         Project Number: 30128255           ogger         Ellen Redner         Editor:         Stan McGrane         Project Number: 30128255           § 6         Gesunswater         § 8         9         Construction Data         Declaration           -61         -64         -64         Amount         94         Manual Manuer         Manuer on the cationable learner           -64         -64         -64         Amount         94         Manuer on the cationable learner           -65         -66         -66         -76<	-								
Diffuse         Diffuse         Opposite         Descense           coger:         Ellen Refrer         Editor:         Sean McGrane         Project Number: 30128255           ge         Ownedweit         Big         Big         Big         Controller         Descense           ge         Ownedweit         Big         Big         Big         Controller         Descense         Naterial Volume         Naterial Volume           ge         Ownedweit         Big	-			]			•	•	-
Line Redner       Ellion Redner       Editor:       Sean McGrane       Project Number: 30126255				(				Location: <u>PG&amp;I</u>	E Topock, Needles California
Image: Section of the section of t	-				est		-	Droject Number	r: 20126255
-0-     -0-     Allvium     SM       -6-     -0-     Allvium     SM       -6-     -0-     Allvium     SM       -6-     -0-     Allvium     SM       -6-     -0-     -0-     Allvium     SM       -6-     -0-     -0-     -0-     -0-       -6-     -0-     -0-     -0-     -0-       -6-     -0-     -0-     -0-     -0-       -6-     -0-     -0-     -0-     -0-       -6-     -0-     -0-     -0-     -0-       -6-     -0-     -0-     -0-     -0-       -6-     -0-     -0-     -0-     -0-       -6-     -0-     -0-     -0-     -0-       -7-     -0-     -0-     -0-     -0-       -7-     -0-     -0-     -0-     -0-       -7-     -0-     -0-     -0-     -0-       -7-     -0-     -0-     -0-     -0-       -7-     -0-     -0-     -0-     -0-       -7-     -0-     -0-     -0-     -0-       -7-     -0-     -0-     -0-     -0-       -7-     -0-     -0-     -0- <td< td=""><td>Loggei</td><td>•</td><td></td><td></td><td></td><td></td><td></td><td></td><td>. <u>30120233</u></td></td<>	Loggei	•							. <u>30120233</u>
Image: State of the state	Depth (ft)		Geologic	USCS Code	USCS Class	Const	ruction Details		Note: percentages are the actual
Image: Section of the sectin of the section of the	E.GDT 7/8/22			SM					
Image: Second				SM					
No. Groundwater Collected T1 - T2 - T3 - T4 - T4 - T7 - T	FILES/20 2022-07-08/GINT PROJE			SW-SM					
70       Groundwater Samples Collected       Common set 8 Mesh Collected       (5.0 - 221.5) 88.2 bags       (5.0 - 221.5) 88.2 bags       (5.0 - 221.5) 88.2 bags       (5.0 - 221.5) 88.2 bags         71       72       73       Alluvium Deposits       SW-SM       SW-SM       SW-SM         74       74       74       75       1       Alluvium Deposits       SW-SM       SW-SM         77       76       77       1       1       1       1       1       1         78       1       Alluvium Deposits       SW-SM       SW-SM       1				SM					
Alluvium Deposits SW-SM Alluvium Beposits SW-SM Alluvium Alluvium Beposits SW-SM Alluvium Alluvium Beposits SW-SM Alluvium Alluvium Beposits SW-SM Alluvium Alluvium Alluvium Beposits SW-SM Alluvium Alluvium Alluvium Beposits SW-SM Alluvium Alluvium Alluvium Alluvium Alluvium Beposits SW-SM Alluvium	ИКЕ - ЧАСОДІЗІЗНАНЕВ DOCUMENTISPHARSE II DRILLINGIOE FIELD DOCUMENTATIONIOZ 	Groundwater	Alluvium	SW-SM		Cemex 8 Mesh (8x16) Lapis Lustre		(5.0 - 221.5') 88.2 bags	(5.0 - 221.5') 98 bags (111%) Note: Backfill sand
N/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks represent depth to water (ft. bgs.) first encountered from logging and depth to water measured during the first VAS interval, respectively. Granular backfill material was removed			Deposits						
bgs.) first encountered from logging and depth to water measured during the first VAS interval, respectively. Granular backfill material was removed									
	6		-						
	Ų ŢŢ							Copectively. Chanular	

9	ARC	ADIS			Temporary	Backfill Log	S	Sheet: 5 of 12
Date S		04/24/2022			_ Surface Elevation:	587.37 ft amsl	Well ID: T	CS-2 Pilot
Date C Drilling	•	04/27/2022 Cascade			_ Northing (NAD83): _ Easting (NAD83):	2100921.24 7615150.98	L Client: <u>PG&amp;I</u>	=
-	Method:	Sonic Drilling	3		_ Total Depth:	232 ft bgs		- GW Remedy Phase 2A
Driller N	Name:	Matt Arnold			_ Borehole Diameter:	4-7 inches	Location: <u>PG&amp;I</u>	E Topock, Needles California
Drilling		D Hoeppner		st	_ Depth to First Water:	-		- 20420255
Logger	•	Ellen Redne			_ Editor:	Sean McGrane	Project Number	. <u>30120233</u>
Depth (ft)	Groundwate Sample ID		USCS Code	Class			Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
		Alluvium Deposits	SW-SM					
PROJECT.GPJ GINT DATATEM		Alluvium Deposits	SM					
ESIZO 2022-07-08/GINT		Alluvium Deposits	ML					
		Alluvium Deposits	SM					
L FILESVOO	No Groundwater Samples Collected	Alluvium Deposits	SW-SM		(5.0 - 221.5') Cernex 8 Mesh (8x16) Lapis Lustre Sand		(5.0 - 221.5') 88.2 bags	(5.0 - 221.5') 98 bags (111%) Note: Backfill sand
ONEDRIVE - AR		Alluvium Deposits	ML					
		Alluvium Deposits	sw					
U 100		Alluvium Deposits	SM					
		SCS = Unified						sea level, NR = No Recovery,
6		-						s represent depth to water (ft.
ý <del>ý</del> ,		of the pilot be		d depth	to water measured dur	ing the first VAS interval, re	espectively. Granular l	backfill material was removed
F								

9	ARC	ADIS			Temporary I	Backfill Log	S	Sheet: 6 of 12
Date S		04/24/2022			_ Surface Elevation:	587.37 ft amsl	Well ID: T	CS-2 Pilot
Date C Drilling	•	04/27/2022 Cascade			_ Northing (NAD83): _ Easting (NAD83):	2100921.24 7615150.98	L Client: <u>PG&amp;E</u>	
-	Method:	Sonic Drilling	1		_ Total Depth:	232 ft bgs		- GW Remedy Phase 2A
Driller I		Matt Arnold			_ Borehole Diameter:	4-7 inches	Location: PG&E	E Topock, Needles California
Drilling		D Hoeppner Ellen Redner		st	_ Depth to First Water: _ Editor:	<u>129.5 ft bgs</u> <u>Sean McGrane</u>	Project Number	- 20126255
Loggei	-					ruction Details		. <u>50120255</u>
Depth (ft)	Groundwate Sample ID		USCS Code	USCS Class			Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
101 102 102		Alluvium Deposits	sw					
103_104_104_104_104_104_104_104_104_104_104		Alluvium Deposits	SM					
—107	No Groundwater Samples Collected	Alluvium Deposits	SM		(5.0 - 221.5') Cemex 8 Mesh (8x16) Lapis Lustre Sand		(5.0 - 221.5') 88.2 bags	(5.0 - 221.5') 98 bags (111%) Note: Backfill sand
		Alluvium Deposits	SM					
RIVE - AI		Alluvium	SM					
117 118 118 118 119 119 120		Alluvium Deposits	SM					
Abbre								sea level, NR = No Recovery,
6		-						s represent depth to water (ft. backfill material was removed
Ų <u> </u>		of the pilot bo			to water measured dur	ing the list vas interval, re		
⊢ <u> </u>								

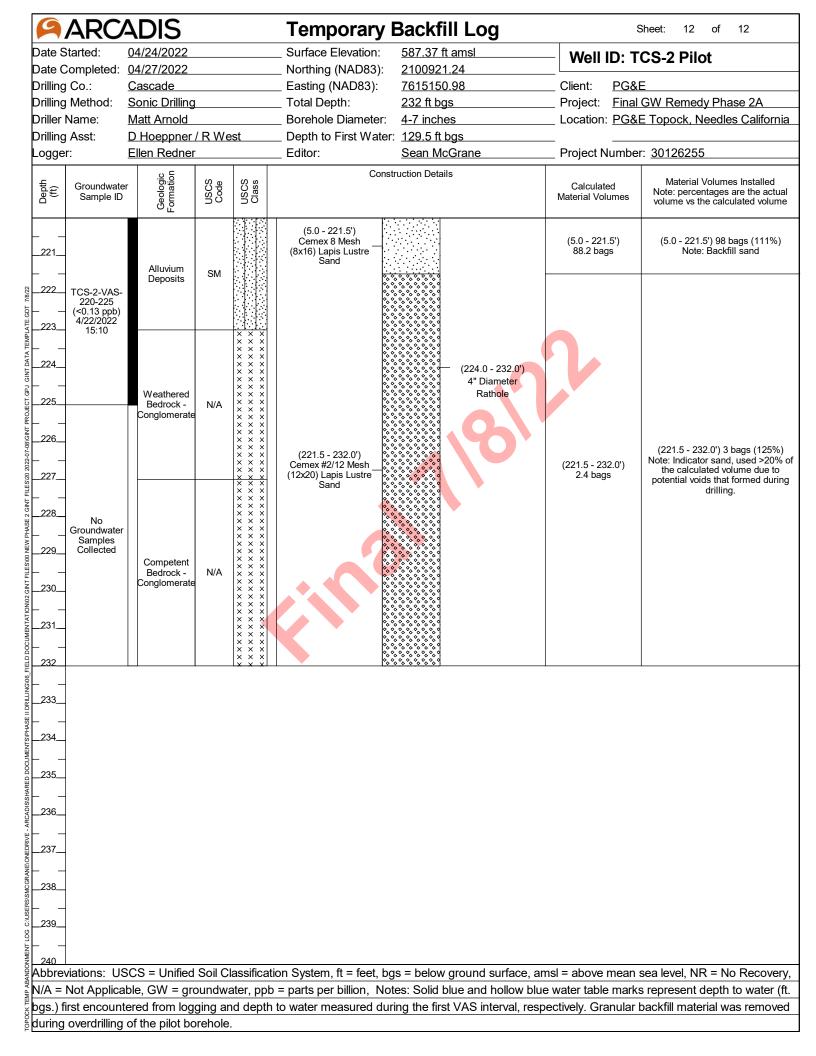
ARC	ADIS			Temporary	Backfill Log	S	sheet: 7 of 12			
ate Started:	04/24/2022			_ Surface Elevation:	587.37 ft amsl	Well ID: T	CS-2 Pilot			
ate Completed:				_ Northing (NAD83):	2100921.24					
rilling Co.:	Cascade Sania Drilling			_ Easting (NAD83):	7615150.98	Client: <u>PG&amp;E</u>				
rilling Method: riller Name:	Sonic Drilling Matt Arnold			_ Total Depth: _ Borehole Diameter:	<u>232 ft bgs</u> 4-7 inches	•	<u>GW Remedy Phase 2A</u> <u>E Topock, Needles Californ</u>			
rilling Asst:	<u>D Hoeppner</u>	/RWe	est	_ Depth to First Water						
ogger:	Ellen Rednei			Editor:	Sean McGrane	Project Number	: <u>30126255</u>			
_	j <u>i</u> c	(0	(0, 10)	Const	ruction Details		Material Volumes Installed			
Groundwate Sample ID		USCS Code	Class	r.	1	Calculated Material Volumes	Note: percentages are the actua volume vs the calculated volum			
	Alluvium Deposits	SM								
123_ 124_ 125_ 125_ Groundwater Samples Collected	Alluvium Deposits	SM								
27  128 129No Sample (127-132 Interval did not produce) 4/19/2022  131 132	Alluvium Deposits	SM		(5.0 - 221.5') Cemex 8 Mesh (8x16) Lapis Lustre Sand		(5.0 - 221.5') 88.2 bags	(5.0 - 221.5') 98 bags (111%) Note: Backfill sand			
33TCS-2-VAS- 131-136(4300 ppb) 3419/2022 15:10 35 36 37	Alluvium Deposits	SM								
37 38 39	Alluvium Deposits	SM								
140	Alluvium Deposits	SM								
breviations: U	SCS = Unified						sea level, NR = No Recover			
	-						represent depth to water (			
<ul> <li>) first specular</li> </ul>	tered from log	ging ar	nd depth	to water measured dur	ing the first VAS interval, r	espectively. Granular b	oackfill material was remov			

-145       Alluvium Deposits       SM         -146       Alluvium Deposits       SM         -146       Alluvium Deposits       SM         -147       Alluvium Deposits       SM         -148       Alluvium Deposits       SM         -148       Alluvium Deposits       SM         -148       Alluvium Deposits       SM         -148       -147.152       Alluvium Deposits         -150       4/20/2022       11.15         -151       Alluvium Deposits       SM         -152       -151       -151         -152       -151       -151         -152       -151       -151         -152       -151       -151         -152       -151       -151	AR	20/-	DIS			Temporary	Backfill Log	S	Sheet: 8 of 12			
Date Complete: 04/2/2022 Dining Co.: Cascade Easting (NAD83): 2100/22124 Cient: PGSE Cient: PGSE Dining Akthor Sonic Dilling Date Complete: Sonic Dilling Dining Akthor Dining Ak								Well ID: T	CS-2 Pilot			
Diffing Method:         Some Diffing         Total Dept:         232 tbgs         Project:         End Statemody Phase 2A.           Dolling Name:         Diffusgoand: /R West         Doptin b First Water         223 tbgs         Location: EGE Topack, Needles calorini.           Logger:         Elan Rednor         Editor:         Same McGrano         Project: Rundber 2012055           Image:         Big E         SampletD         Sig B         Sig B         Construction Data         Project: Rundber 2012055           Image:         SampletD         Sig B         Sig B         Construction Data         Project Rundber 2012055           Image:         SampletD         Sig B         Sig B         Construction Data         Note in Values: Installed           Image:         SampletD         Sig B         Sig B         Construction Data         Note in Values: Installed           Image:         Sig B         Sig B         Sig B         Construction Data         Note in Values: Installed         Note in Values: Installed           Image:         Sig B         Note in Values: Installed         Note in Values: Installed         Note in Values: Installed         Note Sig B         Sig B         Sig								L	=			
Drifer Name:       Matt Annotal       Borcholo Diameter:       4.7 Inches       Location:       Excellent:       ESEE Topack. Neodia: California.         Logger:       Elen Rodror       Elen Rodror       Editor:       Scan McGrano       Project Number: 30128255 <u>B</u> E       Generation: <u>B</u> G	-			1		<b>.</b> . ,						
Logger       Eller Redurt       Editor:       Sean McGrane       Project Number:       20126255            § E Seange D Sig E Sange D Sig E Sig E	-					-	•	-	•			
Bit Construction     Description     Description     Description     Description     Description     Description     Material Volume	-				st		0					
-14- -14- -14- -14- -14- -14- -14- -14-	Logger:		-	r		_		Project Number: <u>30126255</u>				
140     Aluxium     SM       140     Aluxium     SM       140     Aluxium     SM       140     Aluxium     SM       141     Deposite     SM       142     Aluxium     SM       144     Aluxium     SM       145     Aluxium     SM       146     Aluxium     SM       147     Deposite     SM       148     Aluxium     SM       149     Aluxium     SM       140     Aluxium     SM       141     Deposite     SM       143     Aluxium     SM       144     Deposite     SM       145     Aluxium     SM       146     Aluxium     SM       147     Aluxium     SM       148     Aluxium     SM       149     Aluxium     SM       140     Aluxium     SM       141     Aluxium     SM       145     Aluxium     SM       146     Aluxium     SM       147     Aluxium     SM       148     Aluxium     SM       149     Aluxium     SM       149     Aluxium     SM       149     Aluxium	Groun G Sam		Geologic Formation	USCS Code	USCS Class	Const			Note: percentages are the actual			
				SM								
146       147       Alluxium       SM         148       147       Alluxium       SM         148       147       Alluxium       SM         148       147       Alluxium       SM         148       167       167       17000         150       Alluxium       SM       160         151       Alluxium       SM       160         152       Alluxium       SM       160         152       Alluxium       SM       160         152       Alluxium       SM       160         154       Alluxium       SM       160         155       Alluxium       SM       160         156       Alluxium       SM       160         158       Alluxium       SM       160         159       Based       160       160         159       Total positis	ТАТЕМРІ — —			SW-SM				2				
147       Alluvium       SM         148       149       TCS-2/MS- 147-132       Alluvium       SM         149       TCS-2/MS- 147-132       Alluvium       SM       (50 - 221 5')         150       420/25 ppD)       Alluvium       SM       (50 - 221 5')         151       Alluvium       SM       (50 - 221 5')       (50 - 221 5')         152       Alluvium       SM       (50 - 221 5')       (50 - 221 5')         153       Alluvium       SM       (51 - 221 5')       (50 - 221 5')         154       Alluvium       SM       (51 - 221 5')       (50 - 221 5')         155       Alluvium       SM       (51 - 221 5')       (50 - 221 5')         154       Alluvium       SM       (51 - 221 5')       (50 - 221 5')         155       Alluvium       SM       (51 - 221 5')       (50 - 221 5')         156       Alluvium       SM       (51 - 221 5')       (51 - 221 5')         156       Alluvium       SM       (51 - 221 5')       (51 - 221 5')         156       Alluvium       SM       (51 - 221 5')       (51 - 221 5')         156       Alluvium       SM       (51 - 221 5')       (51 - 221 5')         157 <td>Габу Цоргона III</td> <td></td> <td></td> <td>SM</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Габу Цоргона III			SM								
147.152       Alluvium       SM       (5.0 - 221.5)       (5.0 -	INT FILES 2022-07-01			SM								
151       Alluvium       SM       Sand         152       Alluvium       SM       SM         153       Alluvium       SM       SM         154       Alluvium       SM       SM         155       Alluvium       SM       SM         154       Alluvium       SM       SM         155       Alluvium       SM       SM         156       Alluvium       SM       SM         156       Alluvium       SM       SM         157       Alluvium       SM       SM         158       Alluvium       SM       SM         159       Alluvium       SM       SM         160       Alluvium       SM       SM         159       Alluvium       SM       SM         160       Alluvium       SM	147- 147- (<0.025 4/20/2	152 5 ppb) 2022		SM		Cemex 8 Mesh		(5.0 - 221.5') 88.2 bags	(5.0 - 221.5') 98 bags (111%) Note: Backfill sand			
152       Alluvium Deposits       SM       SM         153       Image: SM       Image: SM       Image: SM         154       Image: SM       Image: SM       Image: SM         154       Image: SM       Image: SM       Image: SM         154       Image: SM       Image: SM       Image: SM         155       Image: SM       Image: SM       Image: SM         156       Image: SM       Image: SM       Image: SM         157       Image: SM       Image: SM       Image: SM         158       Image: SM       Image: SM       Image: SM         159       Image: SM       Image: SM       Image: SM         Abbreviations:       USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, NR = No Recovery, NA = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks represent depth to water (ft. bgs.) first encountered from logging and depth to water measured during the first VAS interval, respectively. Granular backfill material was removed				SM		Sand						
Alluvium 154 155 156 156 157 158 158 158 158 158 159 160 159 160 159 160 159 160 159 150 150 150 150 150 150 150 150				SM								
Alluvium Deposits SM Alluvium Deposits SM Alluvium Deposits SM Alluvium Deposits SM Alluvium Deposits SM SM Alluvium Deposits SM Alluvium Deposits SM Alluvium Alluvium Deposits SM Alluvium Deposits SM Alluvium Deposits SM Alluvium Allu	LI 300/LI 302/HIGS 200/LI 302		Alluvium	SM								
N/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue and hollow blue water table marks represent depth to water (ft. bgs.) first encountered from logging and depth to water measured during the first VAS interval, respectively. Granular backfill material was removed	160	s: US	Deposits		assificati	on System, ft = feet, bc	is = below ground surface, a	msl = above mean s	sea level, NR = No Recovery,			
	<sup>∰</sup> N/A = Not Ap	plicat	ole, GW = gr	oundwa	ater, ppb	= parts per billion, No	tes: Solid blue and hollow blu	ue water table marks	s represent depth to water (ft.			
						to water measured dur	ing the first VAS interval, res	pectively. Granular l	backfill material was removed			

	ADIS			I emporary	Backfill Log		sheet: 9 of 12			
Date Started:	04/24/2022			Surface Elevation:	587.37 ft amsl	Well ID: T	CS-2 Pilot			
Date Completed Drilling Co.:	1: 04/27/2022 Cascade			_ Northing (NAD83): _ Easting (NAD83):	2100921.24 7615150.98	L Client: <u>PG&amp;E</u>	=			
Drilling Method:		g		_ Total Depth:	232 ft bgs		- GW Remedy Phase 2A			
Driller Name:	Matt Arnold			Borehole Diameter:	4-7 inches	Location: <u>PG&amp;E Topock, Needles Californ</u> Project Number: <u>30126255</u>				
Drilling Asst: Logger:	<u>D Hoeppner</u> <u>Ellen Redne</u>		st	Depth to First Water: Editor:	<u>129.5 ft bgs</u> <u>Sean McGrane</u>					
	-				ruction Details					
Groundw Gebt Sample		USCS Code	USCS	I	· · · · · · · · · · · · · · · · · · ·	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume			
 161 162  163	Alluvium Deposits	ML								
TCS-2-VA 161.5-166 (<0.025 pp 4/21/202 09:45	.5 Alluvium	SM								
165  166	Alluvium Deposits	ML								
167  168	Alluvium Deposits	SM								
 169 170  171 172 	Alluvium Deposits	ML		(5.0 - 221.5') Cernex 8 Mesh (8x16) Lapis Lustre Sand		(5.0 - 221.5') 88.2 bags	(5.0 - 221.5') 98 bags (111%) Note: Backfill sand			
173 174 175 175 176 177	Alluvium Deposits	SM								
   	Alluvium Deposits	SW-SM								
	Alluvium Deposits	SM								
Abbreviations:	USCS = Unified	d Soil Cla	assificati	on System, ft = feet, bg	s = below ground surface	, amsl = above mean s	sea level, NR = No Recovery,			
							represent depth to water (ft.			
	intered from loc	naina ana	d depth	to water measured dur	ing the first VAS interval. r	espectively, Granular b	backfill material was removed			

ARC	ADIS		Temporary I	Backfill Log	S	heet: 10 of 12		
Date Started:	04/24/2022		Surface Elevation:	587.37 ft amsl	Well ID: T	CS-2 Pilot		
Date Completed:			Northing (NAD83):	2100921.24				
Drilling Co.: Drilling Method:	Cascade Sonic Drillin	n	Easting (NAD83): Total Depth:	7615150.98 232 ft bgs	Client: <u>PG&amp;B</u> Project: <u>Final</u>	<u>-</u> GW Remedy Phase 2A		
Driller Name:	Matt Arnold	9	Borehole Diameter:	4-7 inches	Location: <u>PG&amp;E Topock, Needles Californ</u>			
Drilling Asst:	D Hoeppner	/ R West	Depth to First Water:			•		
_ogger:	Ellen Redne	er	Editor:	Sean McGrane	Project Number	: <u>30126255</u>		
Groundwate (t) Sample ID		USCS Code USCS Class	Const	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume			
	Alluvium Deposits	SW-SM						
 _ <sup>183</sup> TCS-2-VAS- _181-186		ML						
(<0.025 ppb) _184_ 14:45	) Alluvium Deposits	SM						
	Alluvium Deposits	SM						
	Alluvium Deposits	SM						
_187  _188	Alluvium Deposits	SM						
 _189  _190	Alluvium Deposits	SM	(5.0 - 221.5') Cemex 8 Mesh		(5.0 - 221.5')	(5.0 - 221.5') 98 bags (111%)		
	Alluvium Deposits	SM	(8x16) Lapis Lustre		`88.2 bags ´	`Note: Backfill sand ´		
 _193  _194	Alluvium Deposits	SM						
_195  _196	Alluvium Deposits	SM						
  197	Alluvium Deposits	SM						
 	Alluvium Deposits	ML						
	Alluvium Deposits	SM						
Abbreviations: U						sea level, NR = No Recovery		
			• •			represent depth to water (f		
gs.) first encoun	tered from log	gging and deptl	n to water measured dur	ng the first VAS interval, r	espectively. Granular b	oackfill material was remove		

ARC	ADIS			Temporary I	Backfill Log	S	Sheet: 11 of 12			
Date Started:	04/24/2022			_ Surface Elevation:	587.37 ft amsl	Well ID: T	CS-2 Pilot			
Date Completed:				_ Northing (NAD83):	2100921.24	L Client: <u>PG&amp;E</u>				
Drilling Co.: Drilling Method:	Cascade Sonic Drilling	1		_ Easting (NAD83): _ Total Depth:	7615150.98 232 ft bgs		<u>=</u> GW Remedy Phase 2A			
Driller Name:	Matt Arnold			_ Borehole Diameter:	4-7 inches	Location: PG&E Topock, Needles Califo				
Drilling Asst:	D Hoeppner	/RWe	est	_ Depth to First Water:			•			
_ogger:	Ellen Redner	r		_ Editor:	Sean McGrane	Project Number: <u>30126255</u>				
Groundwate Groundwate Sample ID		USCS Code	USCS Class	Const	uction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume			
 _201  202	Alluvium Deposits	SM								
_202	Alluvium Deposits	SM								
203										
204 TCS-2-VAS-202-207 (2300 ppb) 4/22/2022 11:50 	Alluvium Deposits	SM		(5.0 - 221.5') Cemex 8 Mesh		(5.0 - 221.5')	(5.0 - 221.5') 98 bags (111%)			
	Alluvium Deposits	SM		(8x16) Lapis Lustre		88.2 bags '	Note: Backfill sand			
_214(120 ppb) 4/23/2022 09:00 _215 216	Alluvium Deposits	SM								
	Alluvium Deposits	ML								
	Alluvium Deposits	SM								
	Alluvium Deposits	ML								
220		SM								
							sea level, NR = No Recover			
							s represent depth to water ( backfill material was remove			
43.7 III SL CHUUUH	were nom og	yn y ar	ia aepui	water measured duri	ng ure mat vrta littervál, í	copectively. Granular i	Jaonini malenai was remove			



ARC	<b>ADI</b>	S		Bo	oring	l Log	She	eet: 1 of	7		
Date Started:	03/15/2	2022		Surface			Boring No.:	TWB-1 F	Pilot		
Date Completed:				Northin							
Drilling Co.:	Casca			Easting		-	Client: <u>PG&amp;E</u>				
Drilling Method:	Sonic	•	haad		•	<u>129.5 ft bgs</u>	•	<u>W Remedy Pl</u>			
Drill Rig Type: Driller Name:	Matt A	<u>ongyear drill</u>		Boreho		neter: <u>4-7 inches</u> Water: <u>82.0 ft bgs</u>	Location: PG&E	ropock, need			
Drilling Asst:		ppner / R We		Sampli			Project Number:	30126255			
Logger:		irane / G Willf		Sampli	0		i rojoot tumbor.	00120200			
Editor:		/IcGrane		Conver	-		-				
42 02	Sieve mple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid		
			Fill	N/A		(0-0.5 ft) Grading for the drill pad.		(0.0 - 5.2') Air knifed for	(0.0 - 5.2') No drilling flui		
1 2 2 3 5.2			Alluvium Deposits	SM		(0.5-3 ft) Silty sand with gravel (SM); brown (7. very coarse grained, angular to subround; little pebbles, angular to subangular; little silt; little g subround; trace clay; dry; NOTE: Logged from	small to very large granules, angular to	Logged soils disturbed.	used		
_ 3 _ 4 _ 5			Alluvium Deposits	SW-SM		(3-5 ft) Well-graded sand with silt and gravel (5 (7.5YR 5/3); very fine to very coarse grained, a little small to very large pebbles, angular to sub granules, angular to subround; little silt; trace of Logged from air-knife cuttings.	ngular to subround; pround; little clay; dry; NOTE:				
 _ 6 2  _ 7			Alluvium Deposits	SW-SM		(5-7 ft) Well-graded sand with silt and gravel (5 (7,5YR 5/3); very fine to very coarse grained, a little small to very large pebbles, angular to sul granules, angular to subround; little silt; dry. (7-11.75 ft) Silty sand with gravel (SM); brown	ngular to subround; pround; little				
10 Sa	Sieve mples lected	No Groundwater Samples Collected	Alluvium Deposits	SM		(1-11) of the start start of the start of th	ome small to very nules, angular to				
_12			Alluvium Deposits	GW-GM		(11.75-14 ft) Well-graded gravel with silt and s brown (7.5YR 4/3); small to very large pebbles angular to subangular; and very fine to very coa angular to subround; little silt; dry.	, little granules,				
14  15			Alluvium Deposits	ML		(14-15.5 ft) Sandy silt with gravel (ML); brown ( plasticity, no dilatancy; and very fine to very co angular to subround; little small to large pebble subangular; little granules, angular to subround	arse grained sand, es, angular to	(15.0') Hard drilling	(15.0') No drilling flui		
16 <u>1.5</u>					Alluvium Deposits	SW-SM		(15.5-17 ft) Well-graded sand with silt and grad (10YR 5/3); very fine to very coarse grained, ar little small to very large pebbles, angular; little subround; little silt; trace clay; dry.	ngular to subround; granules, angular to	had to trip back in to collect 15 to 17 ft. bgs.	used
			Alluvium Deposits	SW-SM		(17-19.5 ft) Well-graded sand with silt and grav (10YR 5/3); very fine to very coarse grained, ar some small to very large pebbles, angular to su granules, angular to subangular; trace small co little silt; trace clay; dry.	ngular to subround; ubangular; little	(17.0 - 27.0') Hard drilling	(17.0 - 27.0' No drilling flu used		
			Alluvium	SM							
<u></u> \bbreviations: U	SCS = l	Jnified Soil Cl	assificatior		n, ft = f	eet, bgs = below ground surface, ams	sl = above mean se	a level, NR =	No Recover		
				-	-	n, Notes: Solid blue and hollow blue v					
						ed during the first VAS interval, respe		• • •			
ogs.) first encoun	torou ne										

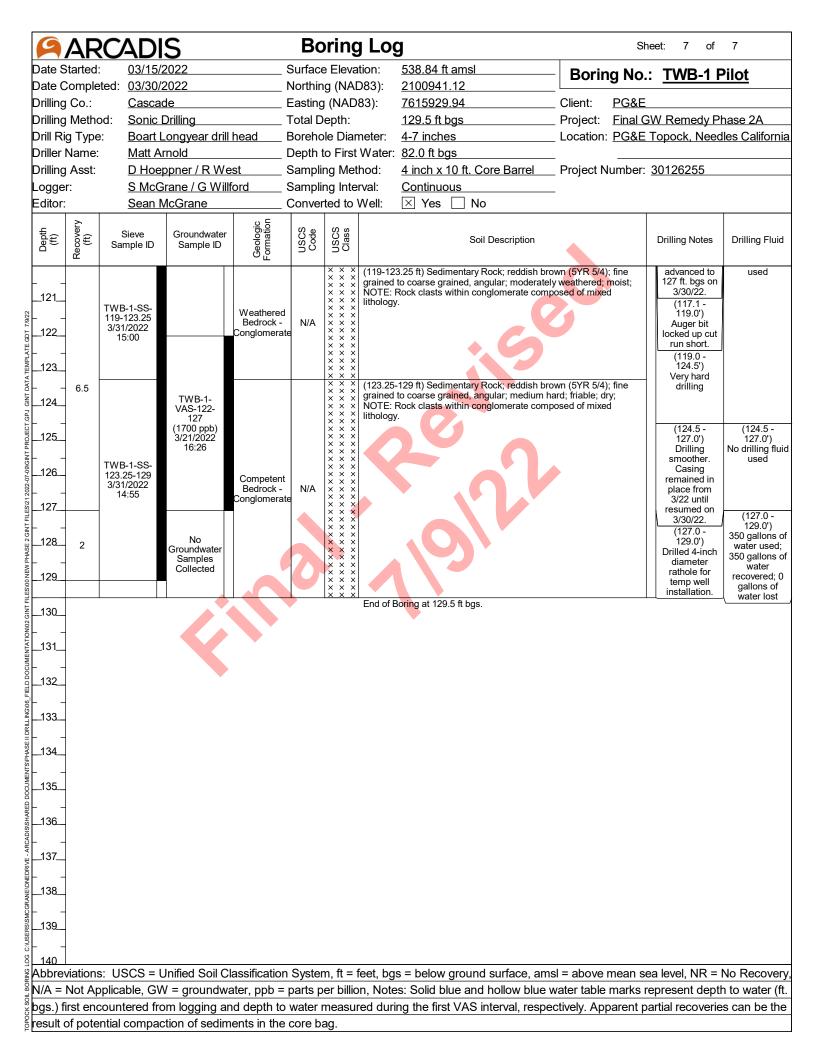
9	<u> 4</u>	CAD	IS		Bo	oring	l Fog		She	et: 2 of	7
Date St			5/2022		Surface			Borino	No.:	TWB-1 F	Pilot
	•	ted: <u>03/3</u>			Northin				-		
Drilling		Case			Easting				PG&E		
Drilling			<u>c Drilling</u>		Total D	•	<u>129.5 ft bgs</u>	-		<u>V Remedy Pl</u>	
Drill Rig			<u>t Longyear d</u> Arnold		Boreho			Location:	PG&E I	opock, Need	lies Californ
Driller N Drilling			Arnold		•		Water: <u>82.0 ft bgs</u> hod: <u>4 inch x 10 ft. Core Barrel</u>	Droigot Nu	mbor: 2	0126255	
Drilling			<u>eppner / R V</u> Grane / G W		Sampli Sampli	-				0120200	
Logger Editor:	•		McGrane		Conver	-					
	>	000		0 5							
Depth (ft)	Recovery (ft)	Sieve Sample II	Groundwat Sample IE		USCS Code	USCS Class	Soil Description (19.5-22 ft) Silty sand with gravel (SM); yellowi	ab brown (10V	D 5/4):	Drilling Notes	Drilling Fluid
							very fine to very coarse grained, angular to sub	round; some s	mall		
_21				Alluvium Deposits	SM		to very large pebbles, angular to subangular; li to subangular; little silt; dry.	ttle granules, a	ngular		
_				Dopoond							
_22							(22-27 ft) Silty sand with gravel (SM); brown (7	5VR 5/3): very	fine		
-							to very coarse grained, angular to subround; so angular to subangular; some small to very larg	ome granules,			
_23							subangular; little silt; dry; NOTE: Cementation				
-	8.8						potentially caliche.				
_24											
				Alluvium Deposits	SM						
_25							(25 ft) Trace small cobble; subangular.				
_26											
_27							(27-29 ft) Silty sand with gravel (SM); brown (7	.5YR 4/4); very	fine		
·							to very coarse grained, angular to subround; so angular to subround; some small to very large	ome granules,	arto		
_28				Alluvium Deposits	SM		subangular; little silt; dry; NOTE: Some sedime	ents moderatel	y		
·							cemented with white matrix, potentially caliche				
_29							(29-33 ft) Silty sand with gravel (SM); brown (7	.5YR 4/3); very	fine		
		No Sieve	No Groundwate				to very coarse grained, angular to subround; so angular to subround; little small to very large p		ular		
_30		Samples Collected	Samples				to subround; little silt; dry; NOTE: Some ceme matrix, potentially caliche.	ntation with wh	ite		
			Collected	Alluvium			matrix, potentially callone.				
_31				Deposits	SM						
_32	7									(32.0 - 37.0')	(32.0 - 37.0
-										hard drilling	No drilling flu used
_33							(33-37 ft) Silty sand with gravel (SM); brown (7				
_34							to medium grained, some coarse to very coars angular to subround; some silt; some small to	large pebbles,	·		
_34_							subangular to subround; trace granules, angul	ar to subround	dry.		
_35				Alluvium			(34.5 ft) Trace very large pebble; angular.				
				Deposits	SM						
							(36 ft) Rip up clasts of weakly cemented sand	with white mat	rix,		
							potentially caliche.				
							(37-40.5 ft) Silty sand with gravel (SM); brown to very coarse grained, angular to subround; so		ry fine		
							angular to subround; little small to very large p	ebbles, angula			
	2.9			Alluvium	SM		subround; little silt; dry; NOTE: Some weak ce matrix, potentially caliche.	mentation with	white		
_39	2.3			Deposits	GIVI						
40											
							eet, bgs = below ground surface, ams				
		•	v				n, Notes: Solid blue and hollow blue v				
• /							ed during the first VAS interval, respe	ctively. Appa	arent pa	rtial recoverie	s can be th
esult o	T pote	ntial comp	action of sed	iments in the	e core ba	ag.					

9	<u>A</u> R	CAD	IS		Bc	oring	Log	Sł	eet: 3 of	7
Date S	tarted	03/15	5/2022		Surface			- Boring No.	: TWB-1 F	Pilot
	•	ted: <u>03/30</u>			Northin	•	,			
Drilling		<u>Casc</u>			Easting			Client: <u>PG&amp;E</u>	W Domody D	2000 24
-	Metho g Type		: Drilling : Longyear drill	head	Boreho		<u>129.5 ft bgs</u> neter: <u>4-7 inches</u>	Project: <u>Final G</u> Location: <u>PG&amp;E</u>	W Remedy Pl	
	Name:		Arnold				Water: 82.0 ft bgs		<u>1000000, 11000</u>	
Drilling	Asst:	D Ho	eppner / R We		Sampli			Project Number:	30126255	
ogge		<u>S Mc</u>	<u> Grane / G Will</u>	ford	Sampli	ng Inte				
Editor:		<u>Sean</u>	McGrane		Conver	ted to	Vell: 🛛 Yes 🗌 No			1
Depth (ft)	Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
					SM		(40 E 40 ft) City and with second (CNA), has			
_41	2.9			Alluvium Deposits	SM		(40.5-42 ft) Silty sand with gravel (SM); bro to medium grained, and very fine to very co angular to subround; and silt; little small to subround; little granules, angular to sub	barse grained sand, large pebbles, angular		
_42							sands weakly cemented with white matrix, (42-48.75 ft) Well-graded sand with silt an	potentially caliche.		
							(7.5YR 4/4); very fine to very coarse graine some granules, angular to subround; some	d, angular to subround:		
_43							pebbles, angular to subround; little silt; tra Some weak cementation with white matrix	ce clay; dry; ŇOTĚ:		
_44							Some weak cementation with white matrix	, potentially calicite.		
_45							AV -			
_				Alluvium Deposits	SM					
_46	5.5									
-										
_47									(47.0 - 50.0')	(47.0 - 50.0
 _48_									Soft drilling	No drilling flu used
_40										
_49							(48.75-50 ft) Well-graded sand with gravel	(SW); brown (7.5YR		
			No	Alluvium Deposits	SW		4/3); very fine to very coarse grained, angu granules, angular to subround; some small			
_50_		No Sieve Samples	Groundwater Samples		<b>_</b>		angular to subangular; trace silt; trace clay (50-52 ft) Silty sand with gravel (SM); brow			
		Collected	Collected				to medium grained, some coarse to very c subangular to subround; and silt; little grar	parse grained sand,		
_51_				Alluvium Deposits	SM		subround; little small pebbles, subangular dry; NOTE: Some weak cementation with	to subround; trace clay;		
- 							caliche.	white matrix, potentially		
_52_							(52-54.5 ft) Silty sand with gravel (SM); bro	wn (7.5YR 4/4); very fine		
_53_							subangular to subround; and silt; little sma angular to subround; trace granules, angul	Il to medium pebbles,		
	6.2			Alluvium Deposits	SM		clay; dry; NOTE: Some weak cementation		(53.0 - 57.0') Hard drilling	(53.0 - 57.0' No drilling flu
_54	-						potentially caliche.			used
							(54.5-57 ft) Well-graded sand with silt and	gravel (SW-SM): brown		
_55							(7.5YR 5/3); very fine to very coarse graine some small to very large pebbles, angular	d, angular to subround;		
				Alluvium	SW-SM		granules, angular to subround; little silt; tra cobbles, angular; dry; NOTE: Trace weak	ice clay; trace small		
_56_				Deposits			matrix, potentially caliche.			
							(57-62 ft) Well-graded sand with silt and g (7.5YR 4/4); very fine to very coarse grained	ravel (SW-SM); brown	(57.0 - 77.0') Normal drilling	(57.0 - 77.0' No drilling flu
_58_							some small to very large pebbles, angular granules, angular to subround; little silt; tra	to subround; little		used
	7.7			Alluvium Deposits	SW-SM		cobbles, angular; dry.			
_59_										
60 \bbre\	/iations	: USCS =	Unified Soil C	lassification	l Svster	<u>  ***  1  </u> n. ft = 1	eet, bgs = below ground surface, a	amsl = above mean se	a level. NR =	No Recover
					-		n, Notes: Solid blue and hollow blu			
• /							ed during the first VAS interval, res	pectively. Apparent p	artial recoverie	s can be th
			action of sedim							

9	AR	<u> RCAD</u>			Bc	pring	Log	SI	neet: 4 of	7
	tarted		/2022		Surface			Boring No.	: <u>T</u> WB-1 F	Pilot
	•	eted: <u>03/30</u>			Northin					
rilling		<u>Casc</u>			Easting		3): <u>7615929.94</u> <u>129.5 ft bgs</u>	Client: <u>PG&amp;E</u> Project: <u>Final (</u>	SW Remedy P	haaa 24
-	Metho g Type		Longyear drill		Boreho	•	0	Location: PG&E	•	
	Vame:		Arnold				Vater: 82.0 ft bgs			
	Asst:		eppner / R We		Sampli			Project Number:	30126255	
oggei			Grane / G Willi		Sampli	•				
ditor:		<u>Sean</u>	McGrane		Conver	ted to	Vell: 🖂 Yes 🗌 No			
Depth (ft)	Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
_61 _62_				Alluvium Deposits	SW-SM		(57-62 ft) Well-graded sand with silt and gravel (7.5YR 4/4); very fine to very coarse grained, at some small to very large pebbles, angular to su granules, angular to subround; little silt; trace of cobbles, angular; dry.	ngular to subround; ubround; little		
_63	7.7			Alluvium Deposits	SM		(62-63.5 ft) Silty sand with gravel (SM); brown ( to very coarse grained, angular to subround; sc angular to subround; little small to very large pe subround; little silt; trace clay; dry; NOTE: Som with white matrix, potentially caliche.	me granules, ebbles, angular to e weak cementation		
_64				Alluvium Deposits	SW		(63.5-64.5 ft) Well-graded sand with gravel (SV (SYR 4/4); very fine to very coarse grained, ang some granules, angular to subround; some sm trace very large pebbles, angular angular to sul	ular to subround; all to large pebbles,		
_65 _66 _67				Alluvium Deposits	SM		trace clay, dry. (64.5-67 ft) Silty sand with gravel (SM); reddish very fine to very coarse grained, angular to sub to very large pebbles, angular to subround; little to subround; little silt; trace clay; dry; NOTE: Tr cementation with white matrix, potentially calicl	yellow (5YR 6/6); round; some small granules, angular ace weak		
 _68 _69		No Sieve Samples Collected	No	Alluvium Deposits	SM		(67-70.5 ft) Silty sand with gravel (SM); brown ( to very coarse grained, angular to subround; litt very large pebbles, angular to subround; little g subround; trace clay; trace small cobbles, angu	le silt; little small to ranules, angular to		
_70			Groundwater Samples Collected	Alluvium Deposits	SW-SM		(70-72 ft) Well-graded sand with silt and gravel brown (5YR 4/4); very fine to very coarse grains subround; some granules, angular to subround large pebbles, angular to subround, little silt; tr	ed, angular to ; some small to		
_ .72_	7			Alluvium Deposits	sc		Some moderate cementation with white matrix, (71-72 ft) Clayey sand with gravel (SC); reddish very fine to very coarse grained, angular to sub	, potentially caliche. h brown (5YR 4/3); round; little		
_ .73  .74				Alluvium Deposits	SM		granules, angular to subround; little small to lar to subround; little clay; trace silt; dry. (72-74.5 ft) Silty sand with gravel (SM); reddish very fine to very coarse grained, angular to sub to very large pebbles, angular to subround; little to subround; little silt; trace clay; trace small co	brown (5YR 4/4); round; some small e granules, angular		
- 75_ - 76_ - 77				Alluvium Deposits	SW-SM		(74.5-77 ft) Well-graded sand with silt and grav brown (5YR 4/4); very fine to very coarse graine subround; some granules, angular to subround large pebbles, angular to subround; trace silt; t small cobbles, subangular; dry.	ed, angular to ; some small to very		
77 78 79 ~	6.3	TWB-1-SS- 77-83 3/31/2022 15:45		Alluvium Deposits	SM		(77-83 ft) Silty sand with gravel (SM); dark redc very fine to very coarse grained, angular to sub very large pebbles, angular to subround; little g subround; little silt; little clay; trace small cobbl	round; some large to ranules, angular to	(77.0') Driller stated he things they drilled trough a boulder.	(77.0') No drilling flu used
.bbre	/iations	s: USCS =	Unified Soil Cl	assification	Syster	n, ft =	et, bgs = below ground surface, ams	l = above mean s	ea level, NR =	No Recove
/A =	Not Ap	oplicable, G	W = groundwa	ater, ppb =	parts p	er billic	n, Notes: Solid blue and hollow blue w	ater table marks	represent dept	h to water (
gs.) fi	rst end	countered f	rom logging ar	nd depth to	water i	neasu	ed during the first VAS interval, respec	ctively. Apparent p	artial recoverie	es can be th
			action of sedim					λινοιγ. Αργαιστίι μ		

	RCAI				-	g Log	•	Sheet: 5 of 7			
te Started		15/2022		Surface			<u>538.84 ft amsl</u>	- Borina Na	o.: <u>TWB-1 F</u>	Pilot	
te Comple				Northin			2100941.12	_			
illing Co.:		scade		Easting		83):	7615929.94	_ Client: <u>PG&amp;I</u>			
illing Meth		nic Drilling		Total D	•		<u>129.5 ft bgs</u>	•	GW Remedy P		
ill Rig Type		art Longyear dril		Boreho			4-7 inches	_ Location: <u>PG&amp;I</u>	<u> E Topock, Neec</u>	lles Califori	
iller Name		tt Arnold		•			82.0 ft bgs				
illing Asst:		loeppner / R W		Sampli	-		4 inch x 10 ft. Core Barrel	_ Project Number	: <u>30126255</u>		
gger:		<u>/IcGrane / G Wil</u>		Sampling Interval:			Continuous	_			
litor:	Sea	an McGrane	-	_ Converted to Well: 🛛 🗵			🛛 Yes 🗌 No		1	1	
Recovery (ft)	Sieve Sample		Geologic Formation	USCS Code	USCS Class		Soil Description		Drilling Notes	Drilling Flu	
_ 31 32 _		No Groundwater Samples Collected	Alluvium Deposits	SM		very fine very larg subround	Silty sand with gravel (SM); dark red to very coarse grained, angular to su e pebbles, angular to subround; little ; little silt; little clay; trace small cobt et to moist	bro <mark>un</mark> d; some large to granules, angular to	Ŧ		
33 - 6.3 34	TWB-1-S 83-84.5 3/31/202 15:40		Alluvium Deposits	SM		very fine granules pebbles,	ft) Silty sand with gravel (SM); dark ru to very coarse grained, angular to , angular to subround; little silt; little s angular to subround; moist to wet; N tion white matrix, potentially caliche.	bround; some	₽		
- 35 36 37	TWB-1-S 84.5-89.1 3/31/202		Alluvium Deposits	SM		(84.5-89 very fine granules angular t	5 ft) Silty sand with gravel (SM); redd to very coarse grained, angular to su angular to subangular; little small to o subangular; little silt; trace clay; mo	bangular; little very large pebbles,	(87.0 - 97.0')	(87.0 - 97.	
- 8_ - 9_ - 0_ -	15:35	TWB-1- VAS-87-92 (<0.025 ppb) 3/20/2022 08:50		0		grained t	ft) Sedimentary Rock; reddish brown o coarse grained; angular; friable; dr d into mostly powder by the sonic dri	/. NOTE: Rock	Hard drilling	30 gallons water used gallons c water recovered; gallons c water los	
1 27.3  3 4 5	TWB-1-S 89.5-97 3/31/202 15:30		Competent Bedrock - Conglomerat	N/A	X X X X X X X X X X X X X X X X X X X						
96  97 98	TWB-1-S 97-98 3/31/202	2	Alluvium Deposits	SP-SM	× × × × × × × × × × × × × × × × × × ×	(97-98 ft grained,	Poorly graded sand with silt (SP-SM angular to subround; little silt; trace c - reddish brown; Topock Alluvium.		Core barrel got stuck had to	water used	
- 8 99 -	15:25 TWB-1-S 98-99.5 3/31/202 15:20	(1200 ppb)	Alluvium Deposits	SM N/A		very fine granules angular t	ft) Silty sand with gravel (SM); reddis to very coarse grained, angular to su , angular to subangular; little small to o subangular; little silt; wet.	bangular; little	<ul> <li>use water and run casing over core barrel. Lost core sample</li> <li>down hole, tripped back in</li> </ul>	gallons o water recovered; gallons o water los	
00 breviation	- 	= Unified Soil C					= below ground surface, am	sl = ahove mean	1 1		
				-							
							s: Solid blue and hollow blue				
	aguntara	a trom loading a	nd danth ta	water	measu	rod durir	ig the first VAS interval, respe	ctively Apparent	nartial recoverie	s can be t	

<b>M</b> AF	<u>RCAD</u>	IS		Bo	pring	l Fog	Sł	neet: 6 of	7
Date Started		/2022		Surface			Boring No.	: TWB-1 F	Pilot
Date Comple				Northin			-		
Drilling Co.:	Casc			Easting			Client: <u>PG&amp;E</u>		
Drilling Meth		: Drilling		Total D	•	<u>129.5 ft bgs</u>	•	W Remedy Pl	
Drill Rig Type		Longyear drill		Boreho			Location: <u>PG&amp;E</u>	TOPOCK, Need	lies Californ
Driller Name		Arnold		Sampli		Water: <u>82.0 ft bgs</u>		20126255	
Drilling Asst:		eppner / R We			0		Project Number:	30120255	
₋ogger: Editor:		<u>Grane / G Will</u> McGrane		Sampli Conver	-		-		
Depth (ft) Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
					× × × × × × × × × × × × × × × × × × ×	(99.5-106 ft) Sedimentary Rock; reddish brown grained to coarse grained, angular; highly wea Very dark gray to black staining.		to recover, core disturbed.	
					× × × × × × × × × × × ×				
_102					$\left  \begin{array}{c} \times \times \times \\ \times \times \end{array} \right $			(102.0 -	(102.0 -
8	TWB-1-SS- 99.5–106		Weathered					106.0') Drilled to 106	106.0') No drilling flu
_1038	3/31/2022		Bedrock - Conglomera	N/A te				ft bgs to plug the core barrel	used
104	10.10				× × × × × × × × ×			and retrieve the 97 to 102	
					$\begin{vmatrix} \times & \times & \times \\ \times & \times & \times \\ \times & \times & \times \end{vmatrix}$			sample.	
					$  \times \times \times \\ \times \times \times$				
					× × × × × × × × ×				
_106									
						(106-110 ft) Sedimentary Rock; reddish brown grained to coarse grained, angular; moderatel	www.weathered: moist:	(106.0 - 110.0')	(106.0 - 110.0')
_107						NOTE: Rock clasts within conglomerate complithology.	osed of mixed	Very hard drilling could	No drilling flu used
	TWB-1-SS-					nuology.		not advance a full 10 ft.	
_1084	106-110		Weathered Bedrock -	N/A					
	3/31/2022 15:10		Conglomera		× × × × × × × × ×				
_109					× × × × × × × × ×				
_110					× × × × × ×	(110-119 ft) Sedimentary Rock; reddish brown	(5VP 5/4): fino		
					$  \times \times$	grained to coarse grained, angular; friable; dry	; NOTE: Rock clasts		
_111			•		× × × × × × × × ×	within conglomerate composed of mixed lithol	ogy.		
_112_		TWB-1- VAS-110-							
·		115 (4300 ppb)							
_113		3/21/2022 11:16			$  \times \times$				
5		-			× × × × × × × × ×				
_114	TWB-1-SS-		Competent		$  \times \times$				
	110-119 3/31/2022		Bedrock - Conglomera	N/A	× × × × × × × × ×				
_115	15:05								
					$  \times \times$				
 117									
-'''-	1							(117.0') Depth 6-inch	(117.0') No drilling flu
11815								diameter	used
1.5					$  \times \times$			casing was drilled 4-inch	(117.1 - 119.0')
								diamter rathole to 127	No drilling flu used
			Weathered		× × × × × ×			ft bgs. 6-inch diameter	(119.0 -
- – 6.5 120			Bedrock - Conglomera	N/A te				casing	124.5') No drilling flu
Abbreviation				-		eet, bgs = below ground surface, am			No Recove
						n, Notes: Solid blue and hollow blue v			
÷ ,						ed during the first VAS interval, respe	ctively. Apparent p	artial recoverie	s can be th
esult of note	ential compa	action of sedim	nents in the	core b	ag.				



ARC	ADIS		Well Const	ruction Log		Sheet: 1 of 7
ate Started:	03/31/2022		_Surface Elevation:	<u>538.84 ft amsl</u>		VB-1 Temp
ate Completed:			Shallow Well Elevation:			
Prilling Co.:	Cascade		Deep Well Elevation:	<u>N/A</u>	Client: PG&E	
	Sonic Drilling		Northing (NAD83):	2100941.12	-	GW Remedy Phase 2A
Driller Name:	Matt Arnold		Easting (NAD83):	<u>7615929.94</u>	Location: <u>PG&amp;E</u>	<u> Topock, Needles Californi</u>
Drilling Asst:	D Hoeppner		Borehole Diameter: Static Water Level:	4-7 inches See Log for Depths	Project Numbe	r: 20126255
ogger: ditor:	Sean McGrai		Development End Date:	÷ .		1. <u>30120233</u>
otal Depth:	129.5 ft bgs		Well Completion:	X Flush Stick-up	 ] To Be Completed	in Well Vault
Groundwat		USCS Code USCS Class	Constru	ction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volume
	Fill	N/A	(0.0 - 1.0') Temporary well	► (0.0 - 8.0') 7" Diameter	Ô	Note: 12-inch diameter vault
_ 1 _ 2 _ 3	Alluvium Deposits	SM	vault (0.3 - 76.7') 2" Sch. 80 PVC Casing	Borehole	0	
4 	Alluvium Deposits	SW-SM				
6 6 7	Alluvium Deposits	SW-SM				
	Alluvium Deposits	SM	(1.0 - 70.5') Cemex #60 (40x70) Lapis Lustre Sand	(8.0 - 127.0') 6" Diameter Borehole	(1.0 - 70.5') 23.5 bags	(1.0 - 70.5') 27 bags (115%) Note: Temporary sand seal
 _13 _14	Alluvium Deposits	GW-GM				
 15	Alluvium Deposits	ML		0         0		
_ 16  _ 17	Alluvium Deposits	SW-SM		>         >		
18 18 19	Alluvium Deposits	SW-SM		0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0		
20	Alluvium	SM				
			ation System, ft = feet, bgs			
teal, NR = No F	ecovery, N/A	= Not Applicat	ole, GW = groundwater, pp	b = parts per billion, Note	s: Hollow blue water	table marks represent dep
		st developmer				

ARC	ADIS			struction Log		Sheet: 2 of 7
ate Started:	03/31/2022		Surface Elevation:	538.84 ft amsl	Well ID: TV	VB-1 Temp
ate Completed:			Shallow Well Elevat			-
•	Cascade		Deep Well Elevatior		Client: PG&E	
-	Sonic Drilling		Northing (NAD83):	<u>2100941.12</u>	-	GW Remedy Phase 2A
	Matt Arnold		Easting (NAD83):	<u>7615929.94</u>	Location: PG&E	<u>E Topock, Needles Californ</u>
	<u>D Hoeppner /</u>	R West	Borehole Diameter:			
00	Ellen Redner		Static Water Level:	See Log for Depths	Project Numbe	r: <u>30126255</u>
	Sean McGrar	e	Development End D			
otal Depth:	<u>129.5 ft bgs</u>		Well Completion:	Flush Stick-up	To Be Completed	in Well Vault
Groundwate Groundwate Sample ID	Geol	USCS Code USCS	Class	nstruction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volum
	Alluvium Deposits	SM	(0.3 - 76.7') — 2" Sch. 80 PVC Casing		0	
      	Alluvium Deposits	SM				
 28 29	Alluvium Deposits	SM				
30 No Groundwate Samples Collected 31 32 33	Alluvium Deposits	SM	(1.0 - 70.5') Cemex #60 (40x70) Lapis Lustre Sand		(1.0 - 70.5') 23.5 bags	(1.0 - 70.5') 27 bags (115%) Note: Temporary sand seal
	Alluvium Deposits	SM				
	Alluvium Deposits	SM				
			•	bgs = below ground surface,		
			•	r, ppb = parts per billion, Note		

<u> ARC</u>	ADIS		Well Const	ruction Log		Sheet: 3 of 7
	03/31/2022		Surface Elevation:	<u>538.84 ft amsl</u>	Well ID: TV	VB-1 Temp
ate Completed:	03/31/2022		Shallow Well Elevation:	<u>538.34 ft amsl</u>		
Drilling Co.:	Cascade		Deep Well Elevation:	<u>N/A</u>	Client: PG&E	<u> </u>
Drilling Method:	Sonic Drilling		Northing (NAD83):	2100941.12	Project: Final	GW Remedy Phase 2A
Driller Name:	Matt Arnold		Easting (NAD83):	7615929.94	Location: <u>PG&amp;E</u>	<u> Topock, Needles Californi</u>
Drilling Asst:	D Hoeppner	RWest	Borehole Diameter:	<u>4-7 inches</u>		
	Ellen Redner		Static Water Level:	See Log for Depths	Project Number	r: <u>30126255</u>
	Sean McGra	ne	Development End Date:			
otal Depth:	129.5 ft bgs	Т	Well Completion:	⊠ Flush  Stick-up	To Be Completed	in Well Vault
Groundwat		USCS Code USCS Class	Constru	ction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volume
		SM	(0.3 - 76.7') (0.3 - 76.7') (0.3 - 76.7')	>		
_41			Casing			
	Alluvium Deposits	SM				
_42						
_43						
_ +0						
_ 44						
_44			ା ୁା			
			ି । ସ			
_45	Alluvium					
_	Deposits	SM .				
_46						
_						
_47						
_48						
_49						
	Alluvium	SW SW				
50 Groundwate	Deposits		(1.0 - 70.5')		(1.0 - 70.5')	(1.0 - 70.5') 27 bags (115%)
Samples Collected			Cemex #60 (40x70)		23.5 bags	Note: Temporary sand seal
	Alluvium					
_51	Deposits	SM				
· _						
_52						
· _						
_ 53	Alluvium					
	Deposits	SM				
_54						
_55						
_ 56	Alluvium Deposits	SW-SM				
_57						
-~' -						
58						
_ 58	Allunium					
·	Alluvium Deposits	SW-SM				
_ 59						
-			ା ଚୈଚ୍ଚିତ୍ର ୧୦୦୦ ଚନ୍ଦ୍ର			
60			া   ১৯৫৩ ation System, ft = feet, bgs	ା <u>କରିରିଏ</u> = below ground surface	amel - above meen	eaa laval 99 - Stainlaga
			ation System, it = feet, bgs able, GW = groundwater, pp			
water (ft. bgs.)	-		÷	n – parts per billion, note		table marks represent dep
	measured bo	siueveiopine	116.			

ARC	ADIS		Well Const	ruction Log		Sheet: 4 of 7
Date Started:	03/31/2022		Surface Elevation:	<u>538.84 ft amsl</u>		VB-1 Temp
Date Completed:	03/31/2022		Shallow Well Elevation:	538.34 ft amsl		
Drilling Co.:	Cascade		Deep Well Elevation:	<u>N/A</u>	Client: <u>PG&amp;</u>	E
-	Sonic Drilling		Northing (NAD83):	2100941.12	-	GW Remedy Phase 2A
	Matt Arnold		Easting (NAD83):	7615929.94	Location: PG&	<u>E Topock, Needles Californi</u>
Drilling Asst:	<u>D Hoeppner</u>		Borehole Diameter:	4-7 inches		
ogger:	Ellen Redner		Static Water Level:	See Log for Depths	Project Numbe	er: <u>30126255</u>
Editor:	Sean McGra	ne	Development End Date:			
otal Depth:	129.5 ft bgs		Well Completion:	≍ Flush      Stick-up	To Be Completed	l in Well Vault
Groundwat Sample IE		USCS Code USCS Class	Constru	ction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volume
	Alluvium Deposits	SW-SM	(0.3 - 76.7') 2" Sch. 80 PVC Casing		60	
63	Alluvium Deposits	SM				
64	Alluvium Deposits	SW	■ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
65  66 	Alluvium Deposits	SM	(1.0 - 70.5') Cemex #60 (40x70) Lapis Lustre Sand		(1.0 - 70.5') 23.5 bags	(1.0 - 70.5') 27 bags (115%) Note: Temporary sand seal
_ 67  _ 68 _ 69 No	Alluvium Deposits	SM				
_70 Groundwate Samples Collected	r Alluvium Deposits	SW-SM				
_71	Alluvium Deposits	SC	(70.5 - 72.0') Holeplug 3/8" — Bentonite Chips		(70.5 - 72.0') 0.4 bags	(70.5 - 72.0') 0.5 bags (125%) Note: Benotnite seal
_ 72  _ 73 74	Alluvium Deposits	SM				
	Alluvium Deposits	SW-SM	(72.0 - 129.5') Cemex #3 (8x20) Lapis Lustre Sand (76.7 - 126.7')		(72.0 - 129.5') 18.2 bags	(72.0 - 129.5') 27.5 bags (151% Note: Filter pack, used >20% of the calculated volume due to potential voids forming during drilling.
-77  _78  	Alluvium Deposits	SM	(76.7 - 126.7') 2" 0.02-Slot Sch. 80 PVC Screen			
			ation System, ft = feet, bgs			
	-		÷	bb = parts per billion, Not	es: Hollow blue wate	r table marks represent dep
o water (ft. bgs.)	measured po	si developmen	п.			

ate Completed: 0 illing Co.: C illing Method: S iller Name: M illing Asst: D gger: E ditor: S tal Depth: 1 Groundwater Sample ID 81 - No 81 - No Groundwater Samples Collected 82 - 83 - 84 - TWB-1-VAS- 82-87	3/31/2022 3/31/2022 Cascade Sonic Drilling Matt Arnold D Hoeppner / Ellen Redner Sean McGran 29.5 ft bgs O L O L O L O Hoeppner / Ellen Redner Sean McGran 29.5 ft bgs O L O L O L O L O L O L O L O L		Surface Elevation: Shallow Well Elevation: Deep Well Elevation: Northing (NAD83): Easting (NAD83): Borehole Diameter: Static Water Level: Development End Date: Well Completion: (76.7 - 126.7') 2" 0.02-Slot Sch. 80 PVC Screen	N/A           2100941.12           7615929.94           4-7 inches           See Log for Depths	•	GW Remedy Phase 2A GW Remedy Phase 2A Topock, Needles California r: 30126255
illing Co.: C illing Method: S iller Name: M illing Asst: D ogger: E ditor: S otal Depth: 1 Groundwater Samples Collected 82 83 84 TWB-1-VAS- 82-87	Cascade Sonic Drilling Matt Arnold D Hoeppner / Ellen Redner 29.5 ft bgs C Song C Song	e USCS Code USCS Code	Deep Well Elevation: Northing (NAD83): Easting (NAD83): Borehole Diameter: Static Water Level: Development End Date: Well Completion: (76.7 - 126.7') 2'' 0.02-Slot Sch. 80	N/A         2100941.12         7615929.94         4-7 inches         See Log for Depths         4/27/2022         ☑ Flush □ Stick-up □	Client: PG&E Project: Final ( Location: PG&E Project Number Project Number Calculated	GW Remedy Phase 2A Topock, Needles Californi r: 30126255 in Well Vault Material Volumes Installed Note: percentages are the actua
illing Method: S iller Name: M illing Asst: D ogger: E ditor: S otal Depth: 1 Groundwater Sample ID No Groundwater Samples Collected 82 - 83 - 84 - TWB-1-VAS- 82-87	Alluvium	e USCS Code USCS Code	Northing (NAD83): Easting (NAD83): Borehole Diameter: Static Water Level: Development End Date: Well Completion: (76.7 - 126.7') 2'' 0.02-Slot Sch. 80	2100941.12 7615929.94 4-7 inches See Log for Depths 4/27/2022 ∑ Flush Stick-up	Project: Final ( Location: PG&E Project Number  To Be Completed Calculated	GW Remedy Phase 2A Topock, Needles Californ r: 30126255 in Well Vault Material Volumes Installed Note: percentages are the actua
iller Name: M illing Asst: D pgger: E ditor: S bital Depth: 1 Groundwater Sample ID 81 _ No 81 _ Groundwater Samples Collected 82 83 84 _ TWB-1-VAS- 82-87	Alluvium Alluvium Alluvium	e USCS Code USCS Code	Easting (NAD83): Borehole Diameter: Static Water Level: Development End Date: Well Completion: (76.7 - 126.7') 2'' 0.02-Slot Sch. 80	7615929.94         4-7 inches         See Log for Depths         4/27/2022         ∑ Flush ☐ Stick-up ☐	Location: PG&E	Topock, Needles Californi r: <u>30126255</u> in Well Vault Material Volumes Installed Note: percentages are the actua
illing Asst: D ggger: E litor: S otal Depth: 1 Groundwater Sample ID 81 Oroundwater Samples Collected 82 Oroundwater Samples Collected 83 Oroundwater Samples Collected 84 TWB-1-VAS- 82-87	Alluvium	e USCS Code USCS Code	Borehole Diameter: Static Water Level: Development End Date: Well Completion: (76.7 - 126.7') 2'' 0.02-Slot Sch. 80	4-7 inches           See Log for Depths           4/27/2022           ∑ Flush □ Stick-up □	Project Number	r: <u>30126255</u> in Well Vault Material Volumes Installed Note: percentages are the actua
and the second s	Alluvium	e USCS Code USCS Code	Static Water Level: Development End Date: Well Completion: Constru (76.7 - 126.7') 2" 0.02-Slot Sch. 80	See Log for Depths           4/27/2022           ⊠ Flush □ Stick-up □	To Be Completed	in Well Vault Material Volumes Installed Note: percentages are the actua
ditor: <u>S</u> ptal Depth: <u>1</u> Groundwater Sample ID	Alluvium	USCS Code USCS USCS Class	Development End Date:Well Completion: Constru (76.7 - 126.7') 2'' 0.02-Slot Sch. 80	<u>4/27/2022</u>	To Be Completed	in Well Vault Material Volumes Installed Note: percentages are the actua
tal Depth: <u>1</u> Groundwater Sample ID <sup>4</sup> <sup>5</sup> <sup>6</sup> <sup>7</sup> <sup>8</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup> <sup>1</sup>	29.5 ft bgs	USCS Code USCS USCS Class	Well Completion: Constru (76.7 - 126.7') 2'' 0.02-Slot Sch. 80	⊠ Flush  Stick-up	Calculated	Material Volumes Installed Note: percentages are the actua
Groundwater Sample ID - No 81 - Groundwater Samples Collected 82 - 83 - 84 - TWB-1-VAS- 82-87	Alluvium Deposits		Constru (76.7 - 126.7')	•	Calculated	Material Volumes Installed Note: percentages are the actua
<ul> <li>No</li> <li>Groundwater Samples Collected</li> <li>82</li> <li>83</li> <li>84</li> <li>TWB-1-VAS- 82-87</li> </ul>	Alluvium Deposits Alluvium		(76.7 - 126.7') (76.7 - 126.7')	· Lion Details		Note: percentages are the actua
81 Groundwater Samples Collected 82	Deposits	SM	2" 0.02-Slot Sch. 80			
			<b>▼</b>		2	
- (870 ppb) 3/18/2022	Deposits	SM				
8510:51 	Alluvium Deposits	SM				(72.0 - 129.5') 27.5 bags (151%
90 (\$0.023 ppb) 3/20/2022 08:50 91 92					(72.0 - 129.5') 18.2 bags	Note: Filter pack, used >20% of the calculated volume due to potential voids forming during drilling.
93 94 95 96	Competent Bedrock - Conglomerate	N/A ************************************				
97						
	Alluvium	SP-SM				
98 TWB-1-VAS-	Deposits					
97-102 (1200 ppb) 3/20/2022 99 - 16:26	Alluvium Deposits	SM				
-		N/A × × ×				
00   breviations: US	CS = Unified		i ion System ft = feet bas	, <u> </u>	 nsl = ahove mean /	sea level .SS = Stainless
				b = parts per billion, Notes:		
water (ft. bgs.) m	-		÷		. IOIIOW DIGC WALCI	

MARC	ADIS			Well Const	ruction Log	:	Sheet: 6 of 7
Date Started:	03/31/2022			_Surface Elevation:	538.84 ft amsl	Well ID: TV	VB-1 Temp
ate Completed:	03/31/2022			Shallow Well Elevation:	538.34 ft amsl		
Drilling Co.:	Cascade			_Deep Well Elevation:	<u>N/A</u>	Client: PG&E	
-	Sonic Drilling			_Northing (NAD83):	2100941.12	•	GW Remedy Phase 2A
oriller Name:	Matt Arnold			_Easting (NAD83):	7615929.94	Location: PG&E	<u>E Topock, Needles Californi</u>
Drilling Asst:	D Hoeppner /	R West		Borehole Diameter:	4-7 inches		
ogger:	Ellen Redner			Static Water Level:	See Log for Depths	Project Numbe	r: <u>30126255</u>
Editor:	Sean McGran	ie		_Development End Date:			
otal Depth:	<u>129.5 ft bgs</u>			_Well Completion: Construc	K     Flush     Stick-up       Ction Details	To Be Completed	
Groundwat			USCS Class	(76.7 - 126.7')		Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volume
	Weathered Bedrock - Conglomerate	N/A		2" 0.02-Slot Sch. 80 PVC Screen			
	Weathered Bedrock - Conglomerate	N/A	<pre>x x x x x x x x x</pre>	(72.0 - 129.5') Cemex #3 (8x20)		(72.0 - 129.5')	(72.0 - 129.5') 27.5 bags (151% Note: Filter pack, used >20% o the calculated volume due to
	Competent Bedrock - Conglomerate			Lapis Lustre Sand		18.2 bags	potential voids forming during drilling.
	Weathered Bedrock - Conglomerate	N/A ×					
120 bbreviations: U	Ĩ	l v	<pre> &lt; &lt;</pre>	ion System, ft = feet, bgs	<u>, ⊡</u> = below ground surface	amsl = above mean	sea level. SS = Stainless
				• •			table marks represent dep
,		st develop		÷			aeb

8         Simple 0         8         5         5         Make all volume         volume vs the disculated vs           121         Weathood         NA         12         2 (10.2 str 5ch 30)         PVC Screen         12	ARC	ADIS		Well Const	ruction Log		Sheet: 7 of 7
Jake Completed:       (33)1/2022       Shallow Well Elevation:       Si3 3/4 ft anal       Client:       PG62E         Jinling Action:       Scacade       Deep Well Elevation:       Si3 (52)24       Location: PG6E Topolock. Needles: Gali         Jinling Action:       Sanit Dilling       Northing (NAD83):       Z10924.112       Project:       Project:       Project:       Project:       PG62 NURBERS/ PG62       Location: PG6E Topolock. Needles: Gali         Jinling Acti:       Deepeting North       Sanit Dilling       Sanit Dilling       Northing (NAD83):       Z10924.112       Project:       Project:<	Date Started:	03/31/2022		Surface Elevation:	538.84 ft amsl	Well ID: T	WB-1 Temp
Northing Method: Sonic Dilling. Northing (NDA3): 2100341.12 Project: End QW Remedy Phase 2A project: End Reduct. Static Water Level: See Log for Depths Project Number: 30126255 Concentration: 20,51 bgs. Well Completion: IC Flush Stackup To Be Completed Number: 30126255 Concentration: See Log for Depths Project Number: 30126255 Project Number: 3012625 Project Number: 30126 Proj							-
Uniter Name:       Matt Amodal       Easting (NAD03);       7615929.94       Location: PG&E Topock, Needles Calif Orgen:         Joing Asst:       D Hoappnet/R West Boerhold Diameter       47. inches         orgen:       Ellen Redner       Static Water Level:       See Log for Depths       Project Number: 20126255         Gator:       Sean McGrane       Development End Date:       42.272022       To Be Completed in Wel Vault         See Log for Depth:       129.51.tbgs       Wel Completion:       Site Number:       20126255         Jage Connobeller       19.8       19.9       19.9       19.9       19.9         1/2       Uset Number:       19.9       19.9       19.9       19.9       19.9         1/2       Uset Number:       19.9       1	-						
Ding Ast:         Disconst / R West.         Borehoe Diameter         4-7 Junches           orger:         Ellen Redner         Static Water Level         See Log for Depths         Project Number: 20126255           call Depth         120.5 fttsga         Well Completon:         [2] Fulsh         Static Water Level         To Be Completed in Well Valt           ge disconstruction         ge disconstruction         ge disconstruction         Generation         Construction         Construction         Restruction         Restruction         Marcine Volumos         <	-	•		,		-	-
orgger:         Elen.Redner.         Static Water Level:         See Log for Depths         Project Number:         2012025           rotal Depth:         120.5 ft.tgs         Well Completion:         Image: Sea McGrane         Overlap McGrane         To Be Completion in Well Vault           ge         Connobutor         ge         ge         Grandwater         ge         Grandwater         Merina Values install         Merina Values installed values installed values install         Merina Values installed va				,		Location: <u>PG&amp;</u>	E Topock, Needles California
Editor         Sean McGrane         Development End Date:         Multiplication         To Be Completed in Well Vault <u>a</u> <u>a</u> <u>construction Data</u> <u>vell Completion:</u>	-		R West				00100055
Total Depth:       129.5 ft.bgs       Well Completion:       Image: Provide the statute of the sta					÷ .	Project Numbe	er: <u>30126255</u>
End         Concrete         State         State         State         Construction Dutails         Calculated Material Volumes         Multiple volumes installs biological state           1/21				-		To Be Completed	l in Well Vault
121         Weathered         N/A           122         20 02-516 56, 00           123         122           124         TWB-t-VAS- 122, 127           125         120, 120, 57           126         Complement Value           127         128, 20, 20           128         Complement Value           129         Complement Value           120         Complement Value           121         Complement Value           128         Complement Value           129         Consolvator Samples           120         Complement Value           121         Complement Value           122         Complement Value           128         Complement Value           129         Consolvator Samples           130         Value           131         Value           132         Value           133         Value           134         Value           135         Value           136         Value           137         Value           138         Value           139         Value           130         Value           <		<u> </u>		Constru			
121       Westweed Bedrock       WA       2* 0.02-Storen       0       1	Groundwat	Geolog Formati					Note: percentages are the actual volume vs the calculated volume
122.12/2020       122.12/2020	 _122 	Bedrock -	N/A ***	2" 0.02-Slot Sch. 80 PVC Screen		80	
128     No     128 <td> (1700 ppb) -125 3/21/2022 </td> <td>Competent Bedrock -</td> <td>× × × × × × × × × × × × × × × × × × ×</td> <td><ul> <li>X</li> <li>(72.0 - 129.5')</li> <li>Cemex #3 (8x20)</li> <li>Lapis Lustre Sand</li> <li>X</li> </ul></td> <td></td> <td>(72.0 - 129.5') 18.2 bags</td> <td>(72.0 - 129.5') 27.5 bags (151%) Note: Filter pack, used &gt;20% of the calculated volume due to potential voids forming during drilling.</td>	(1700 ppb) -125 3/21/2022 	Competent Bedrock -	× × × × × × × × × × × × × × × × × × ×	<ul> <li>X</li> <li>(72.0 - 129.5')</li> <li>Cemex #3 (8x20)</li> <li>Lapis Lustre Sand</li> <li>X</li> </ul>		(72.0 - 129.5') 18.2 bags	(72.0 - 129.5') 27.5 bags (151%) Note: Filter pack, used >20% of the calculated volume due to potential voids forming during drilling.
	– – No _128_ No Groundwate Samples Collected	r	× × × × × × × × × × × × × × × × × × ×		4" Diameter		
133 134 134 135 135 136 137 138 138 138	 _131 	•	Ć				
- 134 - 135 - 135 - 136 - 137 - 137 - 138 - 138			•				
Abbreviations: USCS = Unified Soil Classification System, ft = feet, bgs = below ground surface, amsl = above mean sea level, SS = Stainless	140 Abbreviations: U	SCS = Unified	Soil Class	ification System, ft = feet, bgs	= below ground surface	, amsl = above mean	sea level, SS = Stainless
Steal, NR = No Recovery, N/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Hollow blue water table marks represent of				· · ·			

ARC	٩DI	S		Bo	oring Lo	g		Sheet: 1 of 6			
Date Started:	03/20/2				e Elevation:	537.23 ft amsl	Borin	q No.:	TWB-2 F	Pilot	
Date Completed:					g (NAD83):	2100953.17	_				
Drilling Co.:	Casca			-	(NAD83):	7616017.20	_ Client:	PG&E			
Drilling Method:	Sonic I	<u>_ongyear drill</u>	haad	Total D	eptn: le Diameter:	<u>102 ft bgs</u> 4-7 inches	•		<u>N Remedy Pl</u> Topock, Need		
Drill Rig Type: Driller Name:	Matt A	•••	neau			r: <u>93.2 ft bgs</u>		FGAL	opock, Neeu		
Drilling Asst:		ppner / R We	st	•	ng Method:	<u>4 inch x 10 ft. Core Barrel</u>	– Proiect N	umber: :	30126255		
Logger:		Grane / G Willf		-	ng Interval:	<u>Continuous</u>			50120200		
Editor:		NcGrane		•	ted to Well:	☐ Yes ⊠ No	_				
	Sieve mple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid	
- 1	Sieve nples lected	No Groundwater Samples Collected	Alluvium	SM	to ven to sub littles mixed	5 ft) Silty sand with gravel (SM); brown / coarse grained, angular to subround; angular; little small to large pebbles, and lit, trace clay; dry; NOTE: Pebbles com lithology; mostly metadiorite.	little granules, a igular to suban ponent compos	angular gular; jed of	(0.0 - 5.0') Air-knifed for utility clearance on 3/20/22. Samples collected for logging at approximately 1 ft., 3 ft., and 5 ft. bgs. (8.0 - 17.0') Smooth drilling	useď	
Abbreviations: U	SCS = l	Jnified Soil Cl	assificatio	n Systei	n, ft = feet, b	gs = below ground surface, an	isl = above r	nean sea	a level, NR =	No Recover	
N/A = Not Applica	able, GV	V = groundwa	ater, ppb =	= parts p	er billion, No	tes: Solid blue water table mark	s represent	depth to	water (ft. bgs	s.) measure	
	Sinton	al depth to w	ater could	not be	determined	from soil cores. Apparent partia	l recoveries	can be t	he result of po	otential	
luring the first VA	Sinterv	a., aopt. to 1									

ARC		S		BC	pring	Log			She	et: 2 of	6
ate Started:	03/20/			Surface				Borin	g No.:	TWB-2 P	Pilot
ate Completed:				Northin		•		_			
Prilling Co.:	<u>Casca</u>			Easting				_ Client:	PG&E		~ ~ ~
Prilling Method:	<u>Sonic</u>	•		Total D	•	<u>102 ft bg</u>		_ Project:		V Remedy Pl	
orill Rig Type: Oriller Name:	Matt A	<u>_ongyear drill</u> rpold		Boreho Depth t		neter: <u>4-7 inche</u> Water: <u>93.2 ft bo</u>		_ Location:	PGAET	opock, Need	les Calliom
Filling Asst:		ppner / R We		Sampli			0 ft. Core Barrel	- Project N	umber: 3	0126255	
ogger:		Grane / G Will		Sampli	•					0120200	
ditor:		McGrane		Conver	-		× No	-			
42 02	Sieve Imple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
_21	Sieve mples llected	No Groundwater Samples Collected	Alluvium Deposits Alluvium Deposits Alluvium Deposits	SM		to very coarse graine pebbles, angular to s subangular; trace sm NOTE: Pebbles com (27-29 ft) Silty sand ( coarse grained, angu angular to subangula subangular; trace cla (29-45 ft) Silty sand v to very coarse graine pebbles, angular to s	with gravel (SM); brown d, angular to subangular ubangular; little granules iall cobbles, angular; little ponent composed of mixed SM); brown (7.5YR 5/4); lar to subangular; little s r; trace small to medium y; dry.	Very fine to ve little small to e silt; trace cla ed lithology.	y; dry; y; dry; y les, ilar to ry fine large	(23.0 - 24.0') Rough drilling (26.0 - 27.0') Rough drilling (27.0 - 32.0') Rough drilling drill rod broke. (29.0 - 32.0') Hard drilling (32.0 - 37.0') Rough drilling (37.0 - 47.0') Rough drilling	(23.0 - 24.0' No drilling flu used (27.0 - 32.0' No drilling flu used (29.0 - 32.0' No drilling flu used (32.0 - 37.0' No drilling flu used (37.0 - 47.0' No drilling flu used
	able, GV	V = groundwa	ater, ppb =	parts p	er billio	n, Notes: Solid bl	ground surface, am ue water table mark es. Apparent partial	s represent	depth to	water (ft. bgs	s.) measure

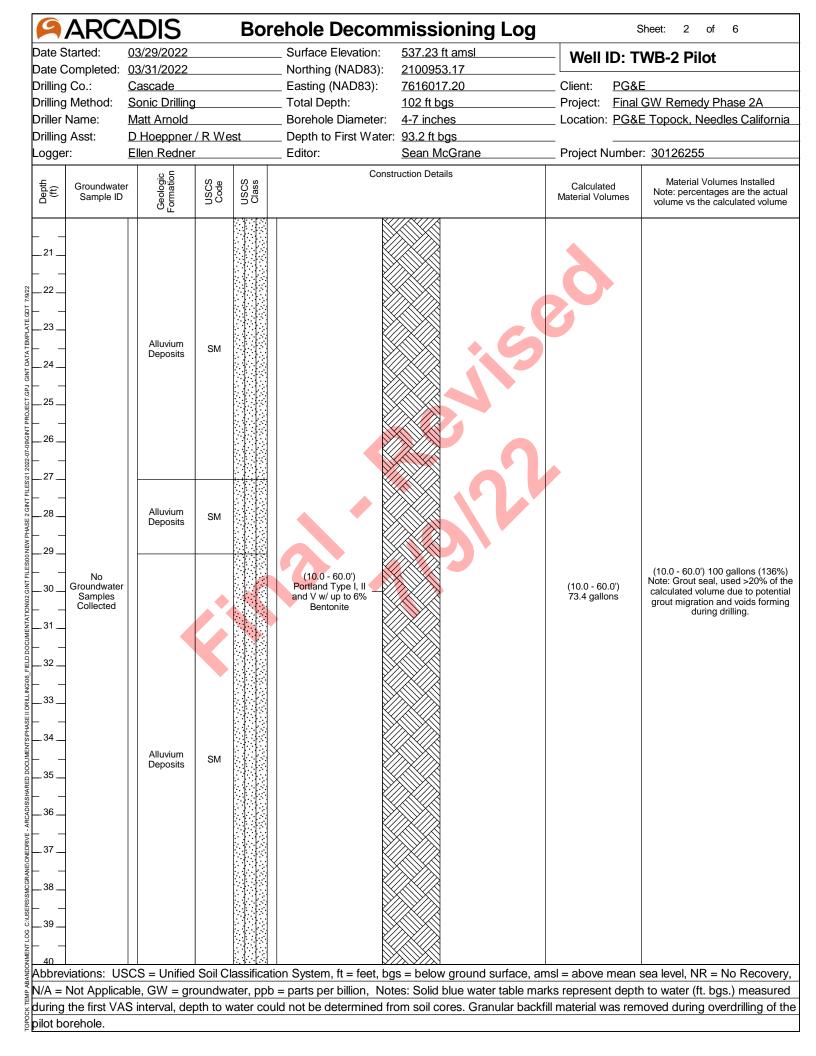
ARC	<u>AD</u>	S		Bc	oring Log	g		Sheet: 3 of	6
Date Started:	03/20/				e Elevation:	537.23 ft amsl	Borina No	D.: <u>TWB-2 F</u>	Pilot
Date Completed:					g (NAD83):	2100953.17	_		
Drilling Co.:	<u>Casca</u>			-	(NAD83):	7616017.20	Client: PG&		
Drilling Method:	<u>Sonic</u>	•		Total D	•	<u>102 ft bgs</u>	•	GW Remedy P	
Drill Rig Type: Driller Name:	Matt A	<u>_ongyear drill</u> rpold			le Diameter: to First Water:	4-7 inches	_ Location: PG&	E Topock, Need	lies Calilom
Drilling Asst:		ppner / R We		•	ng Method:	4 inch x 10 ft. Core Barrel	- Project Numbe	r: 30126255	
Logger:		Brane / G Willf		-	ng Interval:	<u>Continuous</u>		1. <u>30120233</u>	
Editor:		McGrane		-	ted to Well:	$\Box$ Yes $\times$ No	-		
				T					
	Sieve mple ID	Groundwater Sample ID	Geologic Formation	USCS Code	Class	Soil Description		Drilling Notes	Drilling Fluid
_41 _42 _43 _44 _44 _45 _46 _			Alluvium Deposits	SM	to very of pebbles subangu NOTE: (45-64 fi greenisi subangu little gree	t) Silty sand with gravel (SM); brown ( coarse grained, angular to subangular; , angular to subangular; little granules alar; trace small cobbles, angular; little Gravel component composed of mixed by Silty sand with gravel (SM); brown (7 or gray (5GY 6/1); very fine to very coar alar; little small to large pebbles, angul nules, angular to subangular; trace sing ; trace clay; weak cementation; dry; NO ent composed of mixed lithology.	little small to large angular to silt; trace clay; dry; lithology. 2.5YR 5/4) little se grained, angular t ar to subangular; nall cobbles, angular;		
_50 Sa	Sieve mples lected	No Groundwater Samples Collected		0				(47.0 - 54.0') Rough drilling	(47.0 - 54.0' No drilling flu used
53 54 55 56 57 8 58 59			Alluvium Deposits	SM	(52.2-52	2.5 ft) Pulverized metadiorite fragments	5.	(54.0') Core barrel plugged up. (54.1 - 64.0') Rough drilling	(54.0') No drilling flu used (54.1 - 64.0' No drilling flu used
	   - 272	Inified Sail Cl	assification	Suptor	n ft - faat ha	s = below ground surface, am			
						s = below ground surface, am es: Solid blue water table marks			
						om soil cores. Apparent partial		, ,	,
	vo interv	ai, uepiii io W	alei could	norne	uerenninen lla	on son cores. Apparent partial	recoveries carl C	e une result or po	JUCITIA

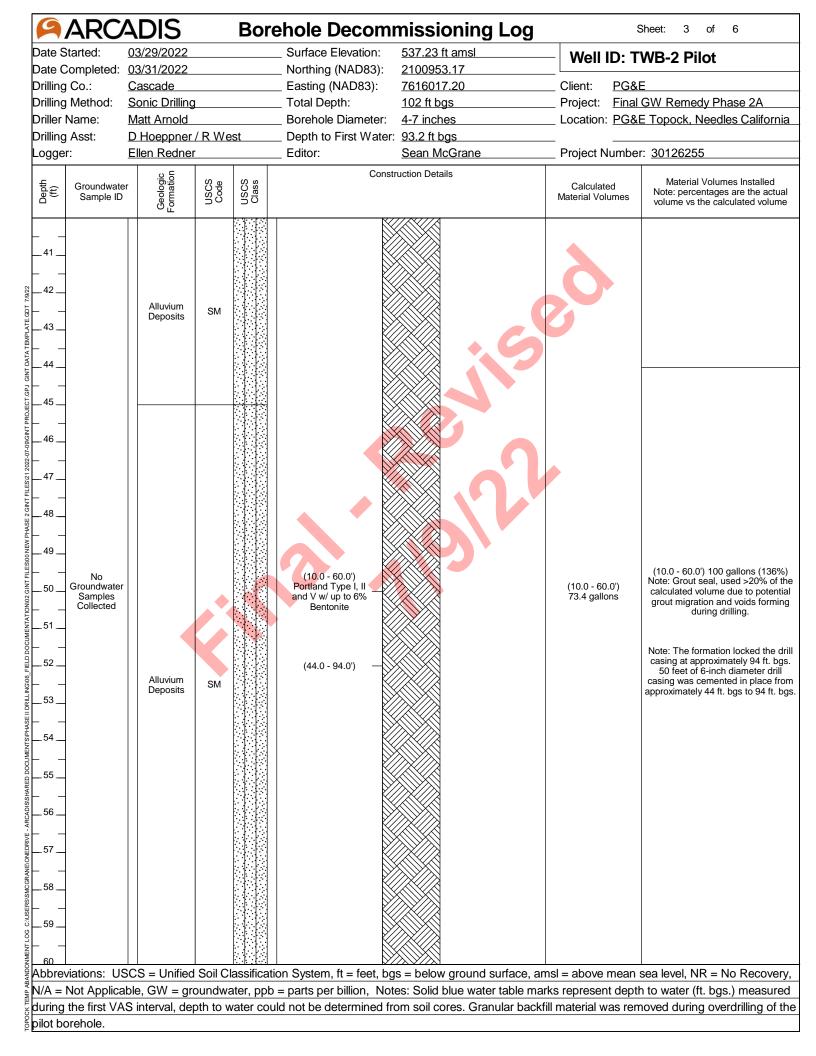
	ADI:	S		Bo	oring	Log	She	et: 4 of	6
Date Started:	03/20/2	022		Surface	e Eleva	ion: <u>537.23 ft amsl</u>	Boring No.:	TWB-2 P	Pilot
Date Completed:				Northin	•			<u></u>	
Drilling Co.:	Cascad			Easting		-	Client: <u>PG&amp;E</u>		
Drilling Method:	Sonic D	•		Total D	•	<u>102 ft bgs</u>	•	<u>N Remedy Pł</u>	
Drill Rig Type: Driller Name:		<u>ongyear drill</u>		Boreho			Location: PG&E	ороск, мееа	les California
Drilling Asst:	Matt Arr	pner / R We		Samplii		Water: <u>93.2 ft bgs</u> nod: <u>4 inch x 10 ft. Core Barrel</u>	Project Number:	30126255	
Logger:	•	ane / G Will		Samplii	•			50120255	
Editor:	Sean M			Conver	-				
~			-						
	Sieve mple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
/U Sa	Sieve mples lected	No Groundwater Samples Collected	Alluvium Deposits Alluvium Deposits Alluvium Deposits Alluvium Deposits Alluvium Deposits Weathered Bedrock - Conglomerat	N/A	X X X X X X X X X X X X X X X X X X X	<ul> <li>(45-64 ft) Silty sand with gravel (SM); brown (7 greenish gray (5GY 6/1); very fine to very coarse subangular; little small to large pebbles, angula little granules, angular to subangular; trace sm little silt; trace clay; weak cementation; dry; NC component composed of mixed lithology.</li> <li>(64-65 ft) Silty sand with gravel (SM); light reddy very fine to very coarse grained, angular to subangular; little small to subangular; little silt; trace clay; dry.</li> <li>(65-69 ft) Silty sand with gravel (SM); light brow fine to very coarse grained, angular to subangular; little silt; trace clay; dry.</li> <li>(69-69.5 ft) Silty sand with gravel (SM); very da very fine to very coarse grained, angular to subangular; little silt; trace clay; dry.</li> <li>(69-69.5 ft) Silty sand with gravel (SM); very da very fine to very coarse grained, angular to subangular; little silt; trace clay; dry.</li> <li>(69-69.5 ft) Silty sand with gravel (SM); very da very fine to very coarse grained, angular to subangular; little silt; trace clay; dry.</li> <li>(69-574.5 ft) Silty sand with gravel (SM); very da very fine to very coarse grained, angular to subangular; little silt; trace clay; dry.</li> <li>(74.5-76.25 ft) Sedimentary Rock; light reddish fine grained to coarse grained, angular; highly rock clasts within matrix composed of mixed lit NOTE: Rock pulverized into mostly powder by methodology.</li> <li>(76.25-102 ft) Sedimentary Rock; light reddish fine grained to coarse grained, angular; slightly massive; rock clasts within matrix composed of mixed into NOTE: Rock pulverized into mostly powder by methodology.</li> </ul>	as grained, angular to ar to subangular; all cobbles, angular; TE: Gravel          tish brown (5YR 6/4); angular; little medium pebbles,         vm (7.5YR 6/4); very lar; little granules, ebbles, angular to         rk gray (7.5YR 3/1); angular; little medium pebbles,         orown (7.5YR 6/4); vangular; little medium pebbles,         orown (7.5YR 6/4); vangular; little medium pebbles,         brown (2.5YR 6/4); veathered; massive; hology; friable; dry; the sonic drilling         brown (2.5YR 6/4); veathered; hard; f mixed lithology;	(64.0 - 67.0') Rough drilling, 1 ft. of slough was included in the core bag sample. (67.0 - 77.0') Rough drilling	(64.0 - 67.0') No drilling fluid used (67.0 - 77.0') No drilling fluid used
78 78 79  			Competent Bedrock - Conglomerat	N/A	× × × × × × × × × × × × × × × × × × ×	some rock fragments 1.5 to 3 inches in length; Rock pulverized into mostly powder by the son methodology.	friable; dry . NOTE:	(7.0 - 87.0°) Very hard drilling, core barrel locked up in hole, had to flush casing over it to free the barrel.	(77.0 - 87.0') 280 gallons of water used; 250 gallons of water recovered; 30 gallons of water lost
				-	n, ft = f	eet, bgs = below ground surface, ams			
		<u> </u>				n, Notes: Solid blue water table marks	· · ·		,
	S intony	al. depth to v	vater could	not be	determ	ined from soil cores. Apparent partial	recoveries can be t	he result of po	otential
during the first VA compaction of se									

atac Competenci:       03/28/2022       Northing (NAD63):       21/08053.17.       Exciting Not.       EXCiting Not.       Project:       End Longyear (fill head.         Nilling Method:       Sance Drilling.       Total Depth:       10/21.1bga       Project:       End Longyear (fill head.       Depthe Diameter:       47.1 inches       Location:       Project:       End Longyear (fill head.       Depthe Diameter:       47.1 inches       Location:       Project:       End Longyear (fill head.       Depthe Diameter:       47.1 inches       Location:       Project:       End Longyear (fill weat.       23.2 lbgs       Project:       Final GW Remody Phase 2A.         Single:       Single:       Single:       Converted to Weat:       Yes (S) No       Project:       Proje	ARC	AD	IS		Bo	ring	g Log			She	et: 5 of	6
aite Competender:       DOUGSUL22       Northming (NADB3):       2100453.11         inling Method:       Schie Dilling.       Total Depti:       102 fttbgs       Project:       Final GW Remedy Phase 2A.         inling Method:       Schie Dilling.       Total Depti:       102 fttbgs       Project:       Final GW Remedy Phase 2A.         inling Method:       Schie Dilling.       Total Depti:       102 fttbgs       Project:       Final GW Remedy Phase 2A.         oger:       Schie Dilling.       Deptiho First Water:       33.2 ftbgs       Project Number:       30126255         ogger:       SubConcer / S. Willord       Sampling Interval:       Contructuous.       Sampling Interval:       Contructuous.         start of Sample D       Sample D       Sampling Interval:       Contructuous.       Sampling Interval:	Date Started:								Borin	g No.:	TWB-2 F	Pilot
Initing Method:       Sonic Diffing — Total Depth:       102 /t bgs       Project:       End QN Remedy Phase 2A         Initing Name:       Depth In Fast Wate:       332 /t bgs       Conclusion:       POSEX ToposeA       Needles Calif.         Initing Name:       Depth In Fast Wate:       332 /t bgs       Project:       End QN Phase 2A         Initing Name:       Depth In Fast Wate:       332 /t bgs       Project Number:       20128255         Initing Name:       Depth In Fast Wate:       Sampling Intervat:       Continuous:       Project Number:       20128255         Initing Name:       Depth In Fast Wate:       Sampling Intervat:       Continuous:       Project Number:       20128255         Initing Name:       Depth In Fast Wate:       Yes IN Initian Name:       Project Number:       20128255         Initing Name:       Depth Initian Name:       Controlwater       Project Number:       20128255         Initing Name:       Depth Initian Name:       Project Number:       20128255       Project Number:       20128255         Initian Name:       Depth Initian Name:       Project Number:       Project Number:       Project Number:       Project Number:         Initian Name:       Depth Initian Name:       Project Number:       Project Number:       Project Number:       Project Number												
<pre>Init Rig Type: Boart Longyard dill head Borohob Diameter: 4-7 inches Location: PG&amp;E Topock, Needles Califi mitting Asst: D Hosppner/R Mest Sampling Interval: 021 bbgs ration: Sampling Interval: Continuous dire: Sampling Direval: Continuous field for Semple D Generated to Welt Ves ISI No for Semple D Generated to Welt N</pre>	-				-	•	83):				ND	
Inline Aame       Matt Amodé       Doph to Frist Wate:       93.2 ft Dgs         orger:       S McGrane       Conjunction       Ach x 10.1 Locare Barrel       Project Number:       30126255         dior:       Sean McGrane       Converted to Weit:       Yes S No       Sol Description       Drilling Nate:         ge:       ge:<	-		•					•	-		-	
Hilling Asset       D. Hospinor / R. West       Sampling Method:       A Incl. x 10 ft. Core Barel       Project Number: 30126255         dar       Sean McGrane       Convented to Welt:       Yes (X) No         get       begt       Sample D       Convented to Welt:       Yes (X) No         get       begt       Sample D       Convented to Welt:       Yes (X) No         get       begt       Sample D       Convented to Welt:       Yes (X) No         get       begt       Sample D       Convented to Welt:       Yes (X) No         get       begt       Sample D       Convented to Welt:       Yes (X) No         get       begt       Sample D       Convented to Welt:       Yes (X) No         get       begt       Sample D       Convented to Welt:       Yes (X) No         get       begt       Sample D       Convented to Welt:       Trease gained to coarse gained and excess gained and exces				nead					_ Location:	PG&E I	opock, ineed	les California
Ogge:       S. McGrane / G. Wilford       Sample D       Drilling Mote       Drilling f         dir				et				· · · · ·	- Project N	umber: ?	20126255	
ditor:     Stan McGrane     Converted to Well:     Yes     No	-					-					0120200	
get bit     Servet D     Groundwater Model     Sign bit     Sign bit     Sign bit     Sign bit     Delling Mode									-			
		<u></u>		<u>ں د</u>								
B1       Image granted in course granted, angular, stightly wetter burd?         B2       No         B2       No         B2       No         B3       Courdwater         B4       Courdwater	Depth (ft) (ft) (ft) (ft)			Geologi Formatio	USCS Code						Drilling Notes	Drilling Fluid
I/A = Not Applicable, GW = groundwater, ppb = parts per billion, Notes: Solid blue water table marks represent depth to water (ft. bgs.) measured	7 - 82 7 - 83 - 7 - 84 7 - 84 7 - 85 88 88	amples ollected	Groundwater Samples Collected	Bedrock - Conglomera	N/A	××××××××××××××××××××××××××××××××××××××	fine grai massive some ro Rock pu methodo	ned to coarse grained, angular; slight ; rock clasts within matrix composed of ck fragments 1.5 to 3 inches in length lverized into mostly powder by the sor plogy.	y weathered; of mixed lithol friable; dry . ic drilling	hard; ogy; NOTE:	Rough drilling (92.0 - 97.0') Rough drilling	(87.0 - 92.0') No drilling flui used (92.0 - 97.0'' No drilling flui used
uring the first VAS interval, depth to water could not be determined from soil cores. Apparent partial recoveries can be the result of potential ompaction of sediments in the core bag.	-		•		not be	detern	nined fro	om soil cores. Apparent partial	recoveries	can be t	ne result of po	otential

Date S	AR	CAD	S		Bc	pring	g Log	9		She	et: 6 of	6
	tarted:	03/20/				e Eleva		537.23 ft amsl	Bori	ng No.:	TWB-2 F	Pilot
		ed: <u>03/29/</u>				ig (NAI		2100953.17	_	-		
Drilling		Casca			~	) (NAD	83):	7616017.20	_ Client:	PG&E		
-	Metho		-		Fotal D	•		<u>102 ft bgs</u>	_ Project:		V Remedy P	
Drill Riq Driller I	g Type:	<u>Boart I</u> Matt A	<u>Longyear drill</u> rpold			ble Diar		<u>4-7 inches</u> 93.2 ft bgs	_ Location	: <u>PG&amp;E I</u>	opock, Need	iles California
Drilling			ppner / R We			ng Met		4 inch x 10 ft. Core Barrel	– Proiect N	Jumber: 3	30126255	
Logger			Grane / G Will			ng Inte		<u>Continuous</u>			0120200	
Editor:			McGrane			ted to		☐ Yes ⊠ No	_			
Depth (ft)	Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
 101  102	3.9	No Sieve Samples Collected		Competent Bedrock - Conglomerate	N/A	× × × × × × × × × × × × × × × × × × ×	fine grai massive some ro	02 ft) Sedimentary Rock; light reddis ned to coarse grained, angular; sligh c; rock clasts within matrix composed ick fragments 1.5 to 3 inches in lengt liverized into mostly powder by the so ology.	ly weathered; of mixed litho n; friable; dry .	hard; logy:		
_104_  -105_  -106_  -107_								201				
				5	0			0				
					0							
 _109 110  111 					0							
					0							
					0							
					0							
					0							
					0							

					missioning Log	)	Sheet: 1 of 6			
ate Started:				_ Surface Elevation:	537.23 ft amsl	Well ID: T	WB-2 Pilot			
ate Completed				_ Northing (NAD83):	2100953.17					
rilling Co.:	<u>Cascade</u>			_ Easting (NAD83):	7616017.20	Client: PG&				
rilling Method:	<u>Sonic Dr</u>	-		_ Total Depth:	<u>102 ft bgs</u>	•	GW Remedy Phase 2A			
riller Name:	Matt Arn			Borehole Diameter:	4-7 inches	Location: PG&	E Topock, Needles California			
rilling Asst:		ner / R We	est	•	0					
ogger:	Ellen Re			_ Editor:	Sean McGrane	Project Numbe	Project Number: <u>30126255</u>			
Groundwa		USCS Code	USCS Class	Const	ruction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volume			
- 1 - 2 - 3				(0.0 - 4.0') Native material from- SPY	(0.0 - 8.0) 7" Diameter Borehole	eò	Note: Backfill material			
- 5 - 6 - 7 - 8 - 9 10 Groundwate	Alluvit Pr Depos			(4.0 - 10.0') Portland Type I, II and V w/ up to 6% Bentonite	(8.0 - 98.0') 6" Diameter Borehole	(4.0 - 10.0') 10.9 gallons	(4.0 - 10.0') 13 gallons (119%) Note: Grout seal			
Samples Collected	Alluvi	m SM		(10.0 - 60.0') Portland Type I, II and V w/ up to 6% Bentonite		(10.0 - 60.0') 73.4 gallons	(10.0 - 60.0') 100 gallons (136%) Note: Grout seal, used >20% of th calculated volume due to potentia grout migration and voids forming during drilling.			
20 bbreviations <sup>.</sup>	Depos	sits SIVI	:: :: : lassificati	ion System ft - feet ba		amsl = above mean	 sea level, NR = No Recovery			
							n to water (ft. bgs.) measure			
/A - Not Applic	anie (-w/	$-\alpha contraction$								





<b>ADIS</b> 03/29/2022						
Sonic Drilling Matt Arnold D Hoeppner	/RWe		<ul> <li>Surface Elevation:</li> <li>Northing (NAD83):</li> <li>Easting (NAD83):</li> <li>Total Depth:</li> <li>Borehole Diameter:</li> <li>Depth to First Water:</li> <li>Editor:</li> </ul>	537.23 ft amsl 2100953.17 7616017.20 102 ft bgs 4-7 inches 93.2 ft bgs Sean McGrane	Client: PG& Project: Final Location: PG&	GW Remedy Phase 2A E Topock, Needles California
Geologic Formation	ode Code	USCS Class	Constr	uction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
Alluvium Deposits	SM			- C	00	
Alluvium Deposits	SM		(60.0 - 102.0') Portland Cement Type I, II and V w/ up to 6% Bentonite		(60.0 - 102.0') 58.4 gallops	(60.0 - 102.0') 50 gallons (86%, Note: Grout seal.
Alluvium Deposits	SM		mixed with saline water		Jo.+ ganons	
Alluvium Deposits	SM					Note: The formation looked the d
Alluvium Deposits	SM		(44.0 - 94.0')			Note: The formation locked the d casing at approximately 94 ft. bg 50 feet of 6-inch diameter drill casing was cemented in place frc approximately 44 ft. bgs to 94 ft. b
Weathered Bedrock - Conglomerate		× × × × × × × × × × × × × × × × × × ×				
Competent Bedrock - Conglomerate	N/A	× × × × × × × × × × × × × × × × × × ×				
	Matt Arnold D Hoeppner Ellen Redner O E O E O E O E O E O E O E O E O E O E	Sonic Drilling         Matt Arnold         D Hoeppner / R We         Ellen Redner	Sonic Drilling         Matt Arnold       Poppner / R West         Ellen Redner       Signal       Signal	Sonic Drilling       Total Depth:         Matt Arnold       Borehole Diameter:         D Hoeppner / R West       Depth to First Water:         Ellen Redner       Editor:         Constr       SM         Alluvium       SM         Veathered       N/A         SM       X × ×         Veathered       N/A         SM       X × ×         Conglomerate       N/A         X × ×       X × ×         X × ×       X × ×         X × ×       X × × <tr< td=""><td>Sonic Drilling       Total Depth:       102 ft bgs         Matt Arnold       Borehole Diameter:       4-7 inches         D Hoeppner/R West       Depth to First Water:       93.2 ft bgs         Borehole Diameter:       Editor:       Sea MoGrane         Borehole Diameter:       Construction Details         Borehole Diameter:       Construction Details         Borehole Diameter:       Construction Details         Borehole Diameter:       Fortant Cament         Alluvium       SM       Fortant Cament         Matter Cament       N/A       State Cament         SM       Fortant Cament       Fo</td><td>Sonic Drilling       Total Depth:       102 ft bgs       Project: Final         Matt Arnold       Borehole Diameter:       4.7 inches       Location: PG&amp;         Debeopner/R.West       Depth to First Water:       3.2 ft bgs       Project Numbe         Ellen Redner       Editor:       Sean McGrane       Project Numbe            <ul> <li></li></ul></td></tr<>	Sonic Drilling       Total Depth:       102 ft bgs         Matt Arnold       Borehole Diameter:       4-7 inches         D Hoeppner/R West       Depth to First Water:       93.2 ft bgs         Borehole Diameter:       Editor:       Sea MoGrane         Borehole Diameter:       Construction Details         Borehole Diameter:       Construction Details         Borehole Diameter:       Construction Details         Borehole Diameter:       Fortant Cament         Alluvium       SM       Fortant Cament         Matter Cament       N/A       State Cament         SM       Fortant Cament       Fo	Sonic Drilling       Total Depth:       102 ft bgs       Project: Final         Matt Arnold       Borehole Diameter:       4.7 inches       Location: PG&         Debeopner/R.West       Depth to First Water:       3.2 ft bgs       Project Numbe         Ellen Redner       Editor:       Sean McGrane       Project Numbe <ul> <li></li></ul>

ARC	03/29/2022			Surface Elevation:	537.23 ft amsl				
ate Completed:				_ Northing (NAD83):	2100953.17		WB-2 Pilot		
illing Co.:	Cascade			_ Easting (NAD83):	7616017.20	Client: PG&	E		
illing Method:	Sonic Drilling			_ Total Depth:	102 ft bgs	Project: Final	nal GW Remedy Phase 2A		
iller Name:	Matt Arnold			_ Borehole Diameter:	4-7 inches	Location: PG&	E Topock, Needles Califorr		
illing Asst:	D Hoeppner		st	-	-	<b></b>			
gger:	Ellen Redner			_ Editor:	Sean McGrane	Project Numbe	r: <u>30126255</u>		
Groundwate Sample ID		USCS Code	USCS Class	Consti	uction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actuvolume vs the calculated volum		
81	Competent Bedrock - Conglomerate	N/A		(44.0 - 94.0') (60.0 - 102.0') Portland Cement Type I, II and V w/ up type V& Bentonite mixed with saline water Don System, ft = feet, bg	(98.0 - 102.0) 4" Diameter Rathole	(60.0 - 102.0') 58.4 gallons	Note: The formation locked the casing at approximately 94 ft. b 50 feet of 6-inch diameter dril casing was cemented in place fr approximately 44 ft. bgs to 94 ft. (60.0 - 102.0') 50 gallons (86% Note: Grout seal.		
							sea level, NR = No Recove		
A – Not Applies	ble. GW = arc	oundwa	ater, ppb	= parts per billion. Not	es: Solid blue water table m	arks represent dept	h to water (ft. bgs.) measur		

		ADIS		ROL		missioning Lo	yg í	Sheet: 6 of 6
	started:	03/29/2022			_ Surface Elevation:	537.23 ft amsl	Well ID: T	WB-2 Pilot
	completed:	<u>03/31/2022</u>			_ Northing (NAD83):	<u>2100953.17</u>		=
)rilling )rilling	Co.: Method:	Cascade Sonic Drilling			_ Easting (NAD83): _ Total Depth:	7616017.20 102 ft bgs	Client: <u>PG&amp;</u> Project: <u>Final</u>	E GW Remedy Phase 2A
-	Name:	Matt Arnold			Borehole Diameter:	4-7 inches	-	E Topock, Needles Californi
	Asst:	D Hoeppner	/ R We	st	Depth to First Water:			
ogge		Ellen Redner			Editor:	Sean McGrane	Project Numbe	r: <u>30126255</u>
Depth (ft)	Groundwate Sample ID		USCS Code	USCS Class	Const	ruction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actua volume vs the calculated volum
 _101 		Competent Bedrock - Conglomerate	N/A	× × × × × ×	(60.0 - 102.0') Portland Cement Type I, II and V w/ up to 6% Bentonite mixed with saline water		(60.0 - 102.0') 58.4 gallons	(60.0 - 102.0') 50 gallons (86% Note: Grout seal.
102							0	
 104							2	
_								
105								
_								
106								
107							V	
 108								
100								
 109					$\mathbf{A}$	(9)		
.110								
_								
.111								
.113								
_								
116								
_								
 117								
 117  _118								
 117  _118								
_117 _118 _118 _119 _120								
_117 _118 _118 _119 _120 _bbrev J/A =	Not Applica	able, GW = gro	oundwa	ater, ppb	= parts per billion, Not	es: Solid blue water table	e marks represent dept	sea level, NR = No Recover n to water (ft. bgs.) measure noved during overdrilling of t

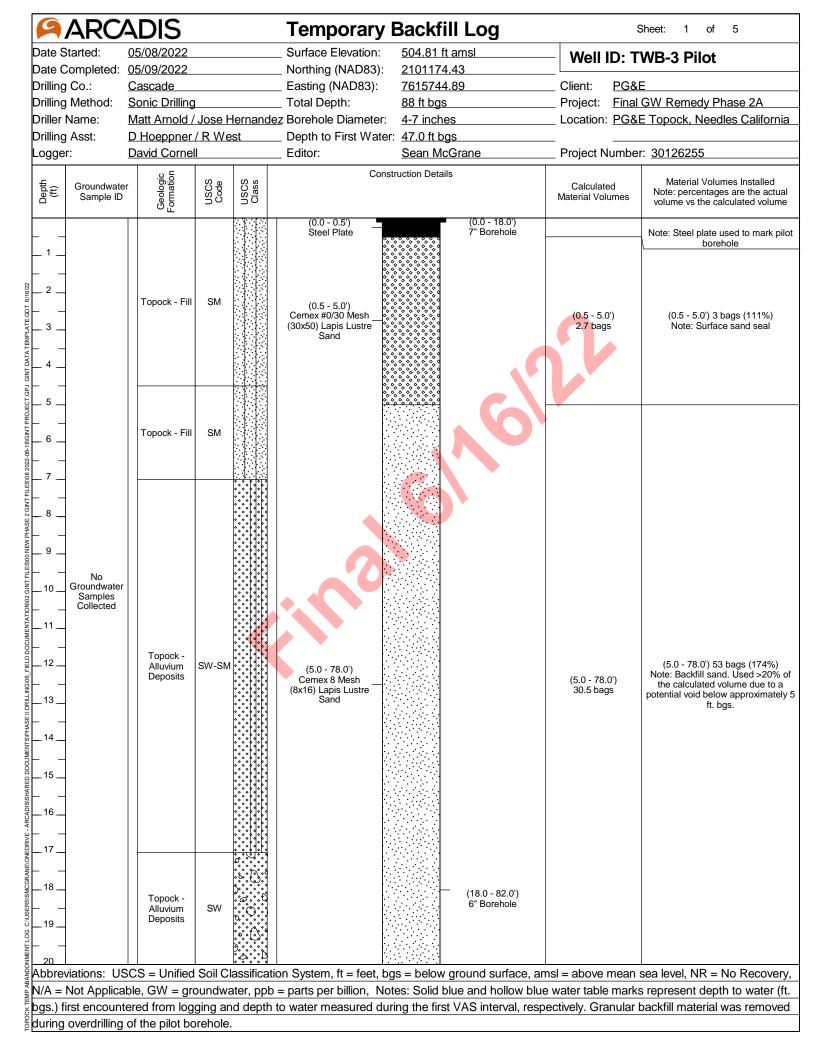
	ADIS		ВС	oring L	.og	Sr	neet: 1 of	5
Date Started:	05/05/2022			e Elevatior		- Boring No.	: TWB-3 F	Pilot
)ate Completed:				ng (NAD83		_		
0	Cascade		-	,		_ Client: <u>PG&amp;E</u>		
•	Sonic Drilling			•	88 ft bgs	•	W Remedy P	
Drill Rig Type: Driller Name:	•.	ar drill head		ble Diameto	er: <u>4-7 inches</u> ter: 47.0 ft bgs	_ Location: <u>PG&amp;E</u>	TOPOCK, Need	iles Calilom
Drilling Asst:	D Hoeppner /			ng Methoo		Project Number:	30126255	
logger:	David Cornell		-	ng Interval			00120200	
Editor:	Sean McGrar		•	ted to We		_		
		Geologic Tormation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
	Sieve nples ected Ground Sam Colle	o twater ples			<ul> <li>5 ft) Silty sand with gravel (SM); very dar (fine to very coarse grained; angular to subar a small to large pebbles; angular to subar ular to subangular; dry to moist.</li> <li>6-7 ft) Silty sand with gravel (SM); brown ( (coarse grained, angular to subangular; tace small ular to subangular; trace small to large co angular; dry.</li> <li>7 ft) Well graded sand with silt and grave YR 5/3); very fine to very coarse grained, a granules, angular to subangular; little small ular to subangular; little silt; trace small to ular to subangular; dry.</li> <li>7 ft) Well graded sand and gravel (SW) / fine to very coarse grained, angular; or arge pebbles, angular to subangular; trace small to arge pebbles, angular to subangular; angular; trace small to subangular; dry.</li> </ul>	IOYR 5/3); very fine to tile silt; trace to large pebbles, ibbles, angular to (SW-SM); brown angular to subangular; all to large pebbles, ibbles, angular to subangular; all to large pebbles, o large cobbles,	(0.0 - 7.0') Fill used to build drill pad. (7.0 - 12.0') Air-knifed for utility clearance on 4/23/22 prior to construction of the drill pad.	(0.0 - 7.0') No drilling flu used (7.0 - 12.0') No drilling flu used
4 19 		Alluviur Deposi			e silt; trace clay; dry.	<u>J</u> anar,	(19.0 - 26.0') Hard drilling	(19.0 - 26.0' No drilling flu used
			-		bgs = below ground surface, an			
I/A = Not Applica	<b>v</b>				lotes: Solid blue and hollow blue		· · ·	
					during the first VAS interval, resp			

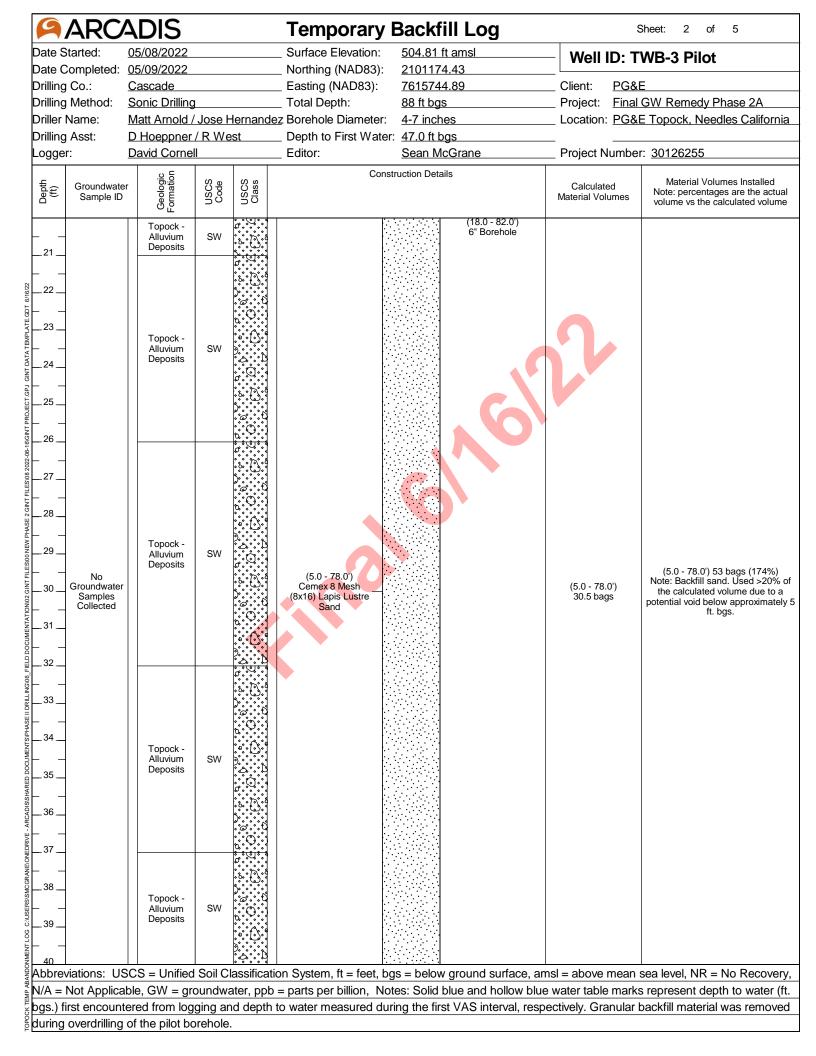
		5		BC	oring	LUY		eet: 2 of	5
Date Started:	<u>05/05/</u>				e Elevati		- Boring No.	TWB-3 F	Pilot
Date Completed:					ig (NAD	-	_		
Drilling Co.:	<u>Casca</u>				) (NAD8	,	_ Client: <u>PG&amp;E</u>		
Drilling Method:	Sonic	•			•	88 ft bgs	•	W Remedy P	
Drill Rig Type:		Longyear drill			ole Diam		_ Location: <u>PG&amp;E</u>	TOPOCK, NEEC	lies Californ
Driller Name:				•		/ater: <u>47.0 ft bgs</u> od: <u>4 inch x 10 ft. Core Barrel</u>		20126255	
Drilling Asst:		ppner / R We Cornell			ng Meth ng Interv		_ Project Number:	30120233	
₋ogger: Editor:		VcGrane		-	rted to V		_		
	ocurri		, <u> </u>						
	Sieve ample ID	Groundwater Sample ID	Geologic Formation	USCS Code		Soil Description		Drilling Notes	Drilling Fluid
4			Alluvium Deposits	SW					
 22 23 23 5 24 25 26			Alluvium Deposits	SW		21-26 ft) Well graded sand and gravel (SW); ery fine to very coarse grained, angular to su b large pebbles, angular to subangular; trace ubangular; trace small to large cobbles, ang ace silt; trace clay; dry.	bangular; little small granules, angular to		
_30 Sa	Sieve mples llected	No Groundwater Samples Collected	Alluvium Deposits	SW		26-32 ft) Well graded sand and gravel (SW); IOYR 3/4); very fine to very coarse grained, a title small to large pebbles, angular to subany ngular to subangular; trace small to large co ubangular; trace clay; dry.	angular to subangular; gular; trace granules,		
			Alluvium Deposits	SW		32-37 ft) Well graded sand and gravel (SW); 10YR 3/4); very fine to very coarse grained, a ace small to large pebbles, angular to subar ngular to subangular; trace small to large co ubangular; trace silt; trace clay; dry.	angular to subangular; ngular; trace granules,	(32.0 - 37.0') In and out of hard drilling	(32.0 - 37.0' No drilling flu used
38 10 			Alluvium Deposits	SW		37-47 ft) Well graded sand and gravel (SW); 10YR 4/3) with brown (10YR 3/6); very fine to ngular to subangular; little granules, angular mall to large pebbles, angular to subangular obbles, angular to subangular; trace silt; dry	o very coarse grained, to subangular; little ; trace small to large /.		
						et, bgs = below ground surface, am			
J/A = Not Applica	-					Notes: Solid blue and hollow blue		· · ·	
			d danth to	watar	mogeure	d during the first VAS interval, respe	otivoly Apparent p	artial recoverie	e can ha th

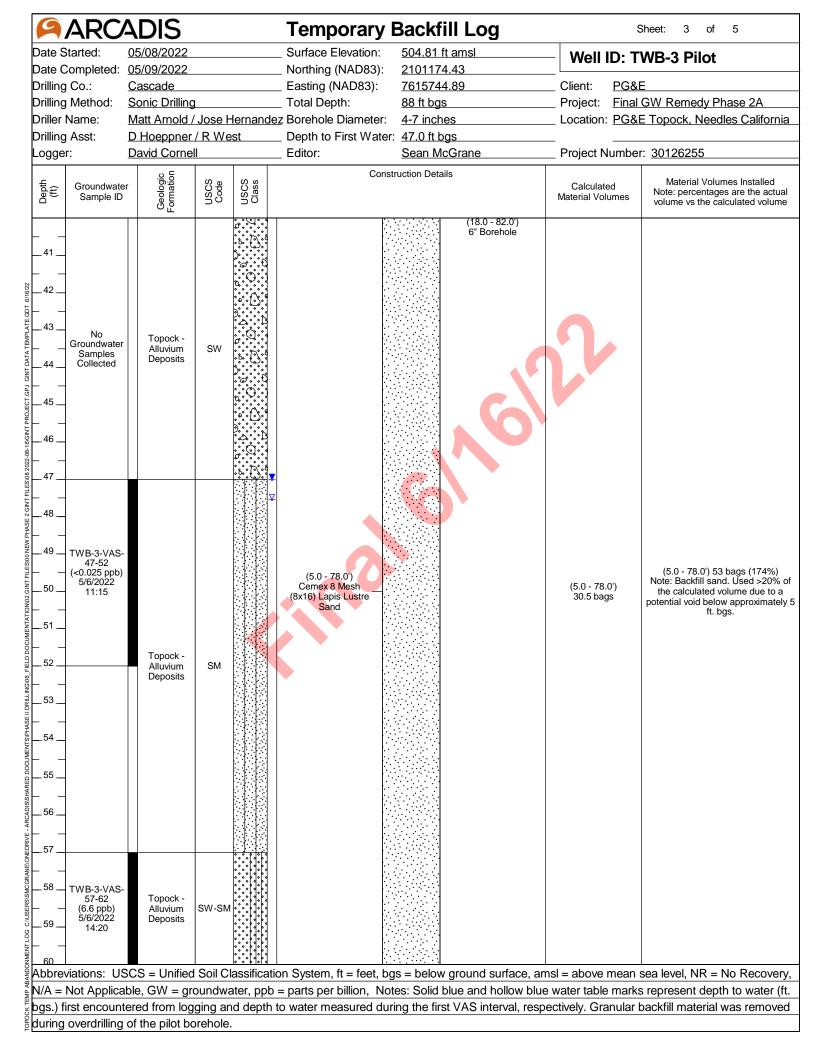
AR	CAD	S		Bc	pring	l Fog		She	et: 3 of	5
Date Started:	05/05/			Surface			Borin	g No.:	TWB-3 F	Pilot
Date Complete Drilling Co.:	ed: <u>05/08/</u> Casca			Northin Easting			Client:	PG&E		
Drilling Method		Drilling		Total D		<u>88 ft bgs</u>			V Remedy Pl	nase 2A
Drill Rig Type:		Longyear drill		Boreho	•	e e			opock, Need	
Driller Name:	<u>Matt A</u>	rnold / Jose H		•		Water: <u>47.0 ft bgs</u>				
Drilling Asst:		ppner / R We		Sampli	-		Project N	umber: 3	30126255	
logger:		Cornell		Sampli Conver	-					
Editor:	<u>Sean</u>	McGrane		Conver		Well: 🛛 Yes 🗌 No				
Depth (ft) Recovery (ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description			Drilling Notes	Drilling Fluid
_41 _42	No Sieve Samples Collected					(37-47 ft) Well graded sand and gravel (SW (10YR 4/3) with brown (10YR 3/6); very fin- angular to subangular; little granules, angu- small to large pebbles, angular to subangu cobbles, angular to subangular; trace silt;	e to very coarse g lar to subangular; lar; trace small to	rained, little	(42.0 - 47.0')	(42.0 - 47.0')
_45 _46 _	TWB-3-SS- 42-47 5/9/2022 09:10	No Groundwater Samples Collected	Alluvium Deposits	SW		(45 ft) Large metabolite cobble; angular to	subangular.		Rough drilling	5 gallons of water used; gallons of water recovered; 5 gallons of water lost
_47 _48 _49 _50 _51	TWB-3-SS- 47-52 5/9/2022 09:20	TWB-3- VAS-47-52 (<0.025 ppb) 5/6/2022 11:15		0		(47-57 ft) Silty sand with gravel (SM); brown yellowish brown (10YR 4/4); very fine to m to subangular; little silt, little small to large subangular; little granules, angular to suba large cobbles, angular to subangular; trace	edium grained, an pebbles, angular ngular; trace sma	gular     ⊻ to II to	(47.0 - 52.0') Set sample screen for VAS after drilling to 62 ft. bgs and tagging water at ~48.7 ft bgs.	(47.0 - 52.0') No drilling flui used (51.0 - 52.0')
	TWB-3-SS- 52-57 5/9/2022 09:30		Alluvium Deposits	SM					Rough drilling	No drilling flu used
- 5 _59  60	TWB-3-SS- 57-62 5/9/2022 09:40	TWB-3- VAS-57-62 (6.6 ppb) 5/6/2022 14:20	Alluvium Deposits	SW-SM		(57-62 ft) Well graded sand with silt and gr brown (7.5YR 4/6); very fine to very coarse subangular; little granules, angular to suba large pebbles, angular to subangular; little cobbles, angular to subangular; trace clay;	grained, angúlar ngular; little smal silt; trace small to wet.	to I to D large		
				-		eet, bgs = below ground surface, a				
		-				n, Notes: Solid blue and hollow blu				
ac stiret once	ountered fr	om logging an	•	water i core ba		ed during the first VAS interval, res	pectively. App	arent pa	rual recoverie	s can be th

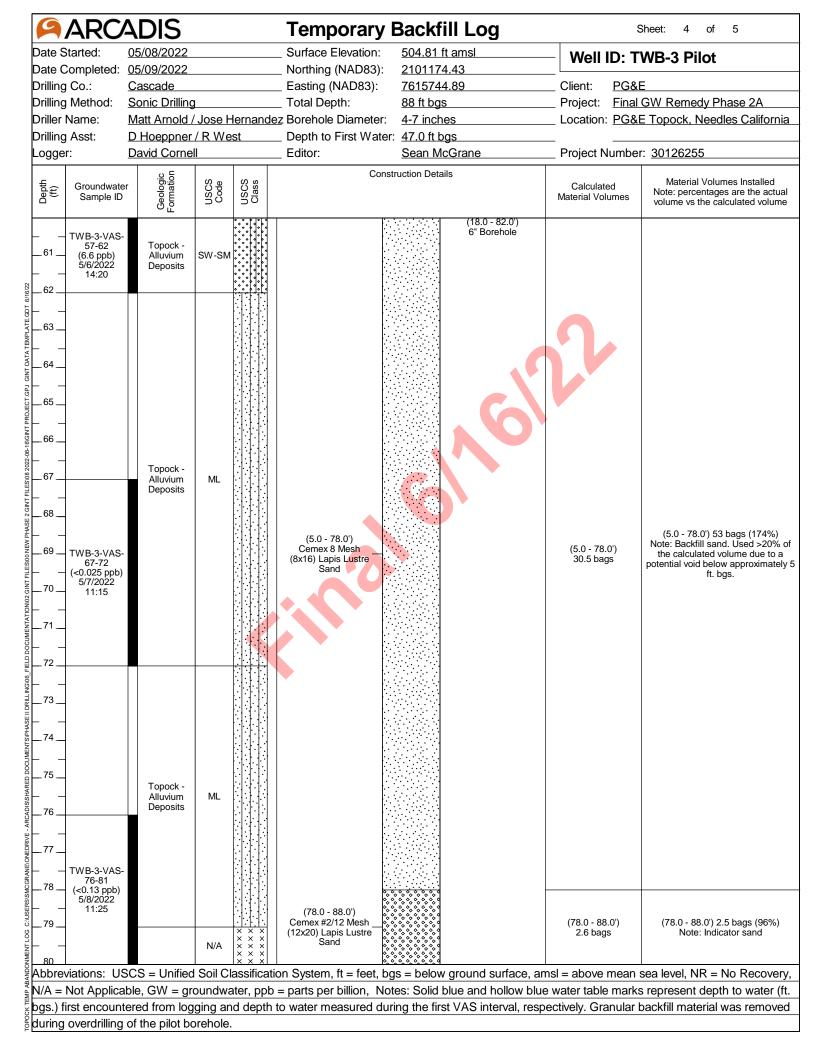
9/	$\overline{AR}$	20/	<u>ADI</u>	S		Bc	oring	g Log	9		She	et: 4 of	5
ate St			<u>05/05/</u>			Surface			504.81 ft amsl	Borin	g No.:	TWB-3 F	Pilot
			05/08/2			Northin		,	2101174.43	_	-		
rilling			Casca			Easting	•	983):	7615744.89	Client:	PG&E		
rilling				Drilling		Total D	•		88 ft bgs	Project:		<u>N Remedy Pl</u>	
rill Rig riller N				<u>_ongyear drill</u> rnold / Jose I		Boreho			4-7 inches	_ Location:	PG&E I	opock, Need	les Californ
										- Draigat N	umbori (	0406055	
rilling /				ppner / R We Cornell		Sampli Sampli	-		4 inch x 10 ft. Core Barrel Continuous			00120200	
ogger: ditor:	•			AcGrane		Conver	-		$\times$ Yes $\square$ No	-			
Depth (ft)	Recovery (ft)		Sieve nple ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class		Soil Description			Drilling Notes	Drilling Fluid
_61	5				Alluvium Deposits	SW-SM		brown (7 subangu large pel	) Well graded sand with silt and grave .5YR 4/6); very fine to very coarse gra lar; little granules, angular to subang bbles, angular to subangular; little silt angular to subangular; trace clay; we	lined, angular llar; little sma trace small to	to I to		
_62								(62-72 ft	) Sandy silt with gravel (ML); strong b	rown (7.5YR	4/6): no	(62.0 - 72.0')	(62.0 - 72.0
 63 		TIME						angular	, no dilatancy; little very fine to mediu to subangular; little clay; little small to to subangular; trace granules, angular large cobbles, angular to subangular;	n grained sar large pebbles to subangula	id, í	Rough drilling	No drilling flu used
65		62 5/9/	-3-SS- -67 2022 1:50						0				
66 - 67	10				Alluvium Deposits	ML							
68 69 70 71		67 5/9/	-3-SS- -72 2022 1:00	TWB-3- VAS-67-72 (<0.025 ppb) 5/7/2022 11:15	5	0							
_ 72 73 _ 74			-3-SS- -77					dark bro medium to large	) Sandy silt with gravel (ML); strong b wn (10YR 3/3); no plasticity, no dilatar grained sand, angular to subangular; pebbles, angular to subangular; trace lar; trace small to large cobbles, angu st.	ncy; little very little clay; little granules, ang	fine to small ular to		
75  76	10		2022 1:10		Alluvium Deposits	ML		•				(75.0 - 76.0') Rough drilling	(75.0 - 76.0 No drilling fl used
_ 77 _ 78 _		77 5/9/	-3-SS- -79 2022 :20	TWB-3- VAS-76-81 (<0.13 ppb) 5/8/2022 11:25									
.79					Competent Bedrock - Conglomerat	N/A		containir	) Sedimentary Rock; dark brown (7.5) ng fragments of metadiorite.	'R 3/4); friable	e; dry;	(79.0 - 82.0') Hard drilling potentially	(79.0 - 82.0 No drilling flu used
bbrevi	iations	s: US	SCS = l	Jnified Soil C	lassificatior	n Syster	n, ft =	feet, bg	s = below ground surface, am	sl = above i	mean sea	a level, NR = l	No Recove
									s: Solid blue and hollow blue				
									ng the first VAS interval, respe			• •	
, ,				ction of sedim	•				<u> </u>	J * 12 P			

	ARC	AD	S		Bo	oring	Log	She	et: 5 of	5
Date Sta		05/05/			Surface	e Eleva	ion: <u>504.81 ft amsl</u>	Boring No.:	TWB-3 P	lot
Date Cor	mpletec	l: <u>05/08/</u>	2022	1	Vorthin	ıg (NAI	083): <u>2101174.43</u>	_		
Drilling C		<u>Casca</u>			-	j (NAD		Client: <u>PG&amp;E</u>		
Drilling M			Drilling		Fotal D		<u>88 ft bgs</u>		V Remedy Ph	
Drill Rig 1	• •		<u>_ongyear drill</u>			le Diar		Location: <u>PG&amp;E T</u>	opock, Need	les California
Driller Na							Water: 47.0 ft bgs			
Drilling A	SSI:		ppner / R We Cornell			ng Met ng Inte		Project Number: 🤅	30126255	
Logger: Editor:			McGrane		-	ted to		-		
	~	000111								
Depth (ft) Recover	(ft)	Sieve Sample ID	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Soil Description		Drilling Notes	Drilling Fluid
				0		× × × × × × × × ×	(79-82 ft) Sedimentary Rock; dark brown (7.5Y containing fragments of metadiorite.	'R 3/4); friable; dry;	bedrock.	
81	10			Competent Bedrock -	N/A	× × × × × × × × × × × × × × × × × ×				
				Conglomerate						
82						× × × × × ×	(82-88 ft) Sedimentary Rock; dark brown (7.5Y	(B 3/4): dry to moist:	(82.0 - 88.0')	(82.0 - 88.0')
<u> </u>							friable, pulverized from the drilling process.	r( 0/+), dry to molst,	Consistently hard drilling.	No drilling fluid used
83						× × × × × × × × × × × × × × × × × × ×			nara aninng.	useu
	N	lo Sieve				$\begin{array}{c} \times \times \times \\ \times \times \end{array}$				
84	S	amples	No Groundwater							
			Samples	Weathered		$\begin{array}{c} \times \ \times \ \times \\ \times \ \times \ \times \end{array}$				
	4.5		Collected	Bedrock - Conglomerate	N/A	× × × × × × × × × × × × × × × × × × ×				
86						$\begin{vmatrix} x & x & x \\ x & x & x \end{vmatrix}$				
						$\begin{array}{c} \times \times \times \\ \times \times \\ \times \times \end{array}$				
87						× × × × × × × × ×				
						$\mathbf{I} \times \mathbf{X} \times \mathbf{X}$				
88										
							End of Boring at 88 ft bgs.			
89					O					
90										
91				•						
91 92										
92										
93										
95										
_96_										
97										
98										
99										
	tioner	1808 - 1	Inified Sell O	oppification	C) /ot-	~ # - ·	oot bas - bolow ground surface.			No Possiver :
							eet, bgs = below ground surface, ams n, Notes: Solid blue and hollow blue v			
							ed during the first VAS interval, respe			
<u> </u>			ction of sedim							









ARCADIS					Temporary	Backfill Log	Sheet: 5 of 5	
	Started:	05/08/2022			Surface Elevation: <u>504.81 ft amsl</u>		- Well ID: TWB-3 Pilot	
Date Completed: Drilling Co.: Drilling Method: Driller Name: Drilling Asst:		Cascade Sonic Drilling Matt Arnold / Jose Hernandez D Hoeppner / R West			_ Northing (NAD83): _ Easting (NAD83): _ Total Depth:	2101174.43 7615744.89	_ [	
							_ Client: <u>PG8</u>	
						88 ft bgs		GW Remedy Phase 2A
					_ Depth to First Water: <u>47.0 ft bgs</u>		Location: <u>PG&amp;E Topock, Needles California</u> Project Number: <u>30126255</u>	
Depth (ft)	Groundwate Sample ID		USCS Code	USCS Class	Const	ruction Details	Calculated Material Volumes	Material Volumes Installed Note: percentages are the actual volume vs the calculated volume
81 82	No Groundwater Samples Collected	Topock - Competent Bedrock - Conglomerate	N/A	× × × × × × × × × × × × × × × × × × ×		(82.0 - 88.0') (82.0 - 88.0') (82.0 - 88.0') (82.0 - 88.0')		(78.0 - 88.0') 2.5 bags (96%) Note: Indicator sand
83 84 85 86 87 88		Topock - Weathered Bedrock - Conglomerate	N/A	(	(78.0 - 88.0') Cemex #2/12 Mesh (12x20) Lapis Lustre Sand		(78.0 - 88.0') 2.6 bags	
99 90 91 92 92 93 94 95 96 96								
								sea level, NR = No Recovery,
						es: Solid blue and hollow blue		
bgs.) f	irst encount	ered from log	iging ai	nd depth	to water measured dur	ing the first VAS interval, resp	ectively. Granular	backfill material was removed
during overdrilling of the pilot borehole.								