

Pacific Gas and Electric Company Project 1581

Strength Test Pressure Report L-114 Replacement MP 12.70 – MP 16.57



Gulf Document No.: 1581-114_2A-RP-0001-00_0

Rev. No.	Date	Revision Description	Preparer Name	Reviewing Engineer Name	Project Manager	Client Approval	
0 9/9/201		Initial Submittal	Redacted			Redacted	



REVISION LOG

PROJECT:	PG&E 2013	PIPELINE RE	PLACEMEN	IT PROJEC	Т				
REPORT NUI	MBER:					GULF	PROJECT 1581	'NO.:	

TITLE: L-114 Strength Test Pressure Report, MP 12.70 – 16.57

Provide a brief description of changes for all revisions following Rev. 0

Rev.	Date	Revision Description
0	9/9/2013	Initial submittal



Use in Accordance with Numbered Document A-34, A-37, and GO 112-E

Sheet 1 of 2

Test Number 6 of 8 STPR Revision Number 0

PART 1 - TEST DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER/ESTIMATOR)

Test D	escript	ion							5,456				and Billion	
Line N	umber o	r Static	on Name L-1	14			Division/District Diablo Job Number 30943472							
Purpos	e of Tes	t: Tes	t new install	ation			MA	OP to	be Estab	lished by	his Test	7 <u>20</u> PSIG	l	
Test T	ie-in Pie	ces at	MP 12.70, I	include reference MP 13.73, MP EB-58. Draw	14.35,	MP 14.58	and	MP 1		newly insta	alled 24" I	114 fro	m	
				d)			If no	o spik	e test foi	existing f	acility, exp	olain:		
Static	Head C	alcula	tion							100				
Maximum Elevation N/A FT Minimum Elevation N/A FT									r _(Elev. r Test Me	Diff.) x 0.4	33 = _ PSI	g		
Elevati	on Differ	rence	1.10	- T						the state of the s	— or guidance	on comple	eting this field,	
Pipe to	be Tes	sted												
Si OD (in.)	ze WT (in.)	API AST Spe	M (psi)	Long Seam (ERW, DSAW, SMLS etc.)	JF (E)	Footage to be Tested	The track and the	tual tage	Location Class	Most Restriction Design Factor	estrictive At At Min. Design MAOP Test			
24,000	0.375	API-	5L 60000	SAWL	1,00	100			3	0,5	38,40	90.03	3 93.01	
22,000	0.375	API-		HFW	1.00	25			3	0,5	32,49	76.18	8 78,70	
24,000	0,375	MSS-S	P-75 60000	24x22 Reducer		2 ea			3	0.5	38,40	90,03	3 93,01	
22.000	0.375	MSS-S	P-75 60000	24x22 Reducer	•	٨			3	0.5	35.19	82.52	2 85.26	
Pipe sp	ecs veri	fied in	field S	cept those list ignature of pe re/Control Poi	rson si nt exce	upervising eptions	test	wall	hickness	and grad	e as the pi	pe 🗵		
Test S	pecifica	tions	(include a spi	ke test when tes	iting exi	sting faciliti	es)	I						
Test Fac	tor <u>1.5</u>	[1A]	Min, Test Pr	essure at Max. E	lev. <u>168</u>	<u>8</u> PSIG	[18]	Max.	Test Pres	sure at Min	Elev. <u>1744</u>	PSIG		
Spike T	est	[10]	Spike Facto				[10]	Spik	e Pressure	e at Max. Ele	t Max. Elev. Box [1A] x [1C] = PSIG			
(comple for spike		[1E]	Spike Press	ıre at Min. Elev.		PSIG	[1F]		1E] x 0.95	ce Pressure =	PSIG			
Test M	edium to	be Us	ed <u>WATER</u>	Minimum T	est Dui	ration <u>8.</u>	<u>0</u> Hou	rs	■ 30% ■ Pre-i	or 30% SMYS SMYS and constallation To Test: 30 m	ver: 8 hours est: Refer to	minimum A-34, Atta		
Signal	ures													
Prepared by (signature) Redacted						Print Name and Phone Number Redacted				Date				
	Approved by (signature) Redacted					Print Name Redacted					Date LANID Redacted			
Test Supervised by (signature)						Time and Date Test Pressure Time and Reached (from Part 2) Ended (from Part 2)				I Date Test Actual Duration of om Part 2) Actual Duration of Test (from Part 2)				
												1		



Use in Accordance with Numbered Document A-34, A-37, and GO 112-E

Sheet 2 of 2 Test Number <u>6</u> of <u>8</u>

STPR Revision Number 0

PART 2 - TEST DATA (TO BE PREPARED BY PERSON SUPERVISING TEST AT TIME OF TEST)

Test Elevation								
	Max. Elevation	in Tes	t Section	FT	Min. E	levation in Test Sect	ionFT	
Test Point FT	[2A] Static Hea	id b/t T	Test Point and M	lax. Elev, PSIG	[2B]	Static Head b/t Tes	t Point and Min. Elev, PSIG	
No Spike Test: Cald	ulations and Te	st Re	suits (complete f	for strength test with	out a sp	ike test)		
Min. Required Test Press Box [1A] + Box [2A] =			Allowable Test Pre B] – Box [2B] =		Pressu	re Range During Test	PSIG	
[2C] Min. Test Pressure	e Indicated PSIG	[2D] Max. Test Pressure IndicatedPSIG						
	alculated Min. Test Pressure at Max. Elev. ox [2C] - Box [2A] =PSIG			ressure at Min. Elev. PSIG				
Spike Test: Calcula	tions and Test I	Result	S (complete for s	trength test with a sp	i oike test)			
Spike Pressure at Test P Box [1E] - Box [2B] =		Required Test Pres A] + Box [2A] =	ssure at Test Point PSIG	Max. Post-Spike Pressure at Test				
[2E] Spike Pressure Inc.	[2F] Min. Test Pressure IndicatedPSIG			4	Max. Post-Spike Test Pressure IndicatedPSIG			
Calculated Spike Pressu Box [2E] + Box [2B] =	1 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	lated Min. Test Pro F] – Box [2A] =	essure at Max. Elev, PSIG		ted Max. Post-Spike P] + Box [2B] =			
Test Acceptance								
Were Leaks Observed ☐ Yes ☐ No	(?			If yes, explain:				
Acceptable Strength Yes No Report strength test failure		If no, explain:						
Test Medium Used		******************************		Time and Date Te	est Ende	st Ended Actual Duration of Test		
Test Instruments		100						
Make, Range, and Ser	ial No. of Pressur	e Reco	ording Device		II SSA STOP SING	Date Last Cali	brated	
Make, Range and Seri A dead weight tester and/o or greater than 90% of SM	or an electronic press			r tests of any pipe seg	ıment equ	Date Last Cali	brated	
Signatures								
Test Supervised by (signature) Prin			Print Name		Date	LANID		
Testing Contractor (if	third party)							
Approved by (signature)			Print Name			Date	LANID	

Attachments

- Test chart
- Schematic piping sketch
- Test log with pressure noted every 15 minutes

Distribution

 Gas Job Closeout Desk, 6121 Bollinger Canyon Road, Building Z1, San Ramon, CA 94583



Use in Accordance with Numbered Document A-34, A-37, and GO 112-E

Sheet <u>1</u> of <u>2</u> Test Number <u>7</u> of <u>8</u> STPR Revision Number <u>0</u>

PART 1 - TEST DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER/ESTIMATOR)

Test D	escripti	ion												
Line N	ımber oı	Static	n Name L-1	14			Divi	Division/District Diablo Job Number 30943472						
Purpos	e of Tes	t: Tes	t new installa	ition			MA	OP to	be Estab	ished by	his Test	7 <u>20</u> PSIG		
Descri	otion of l	Pipe be	eina Tested (nclude reference	drawing	s. field statio	ning, a	ind mile	e points)					
Test S	and Cre	ek Tie		/IP 13.71 for				1.000		.70 to MF	16.57. W	/all Map l	EB-58.	
	an and a second and) ☐ Existing	the second second	The formation of the control of the	If no	o spik	e test for	existing f	acility, exp	lain:		
Static	Head C	alcula	tion											
Maxim	ım Eleva	ition	<u>92</u> F	T			For	Wate	r <u>0 (</u> Elev.	Diff.) x 0.4	133 = <u>0</u> PS	IG		
	ım Elev <mark>a</mark> on Differ								r Test Med	A CONTRACTOR OF THE PARTY OF TH	or guidance	on comple	ting this field,	
Pipe to	be Tes	ited		100000000000000000000000000000000000000	nus lens									
Si	ze	API	or SMYS	Long Seam	JF	Footage	Act	tual	Location	Most		% of SM	YS	
OD (in.)	WT (in.)	AST Spe	M (psi)	(ERW, DSAW, SMLS etc.)	(E)	to be Tested	Fool	tage	Class	Restrictiv Design Factor		At Min Test Press	Test	
24.000	0.375	API-	5L 60000	SAWL	1,00	25			3	0,5	38,40	90,03	93.01	
22,000	0.375	API-	5L 65000	HFW	1,00	10			3	0,5	32,49	76,18	78,70	
24.000	0,375	MSS-SI	P-75 60000	24x22 Reducer		1 ea			3	0.5	38.40	90.03	93.01	
22.000	0.375	MSS-SI	P-75 60000	24x22 Reducer	•	^			3	0,5	35.19	82,52	85.26	
Pipe sp	ecs veri	fied in	field □ S	ept those listognature of pe	rson sı	upervising		wall 1	hickness	and grade	as the pi	pe 🗵		
Test S	pecifica	tions	(include a spil	e test when tes	ting exi	sting faciliti	es)							
Test Fac	tor <u>1.5</u>	[1A]	Min. Test Pre	ssure at Max. E	lev. <u>168</u>	8 PSIG	[18]	Max.	Test Press	sure at Min	Elev. <u>1744</u>	PSIG		
Spike T		[1C]	Spike Factor				[1D]	Spik	e Pressure	at Max. Ele	w. Box [1A]	([1C] =	PSIG	
(comple for spike		[1E]	Spike Pressu	re at Min. Elev.		_ PSIG	(1F)		1E] x 0.95 =		at Min. Elev PSIG			
Test Me	edium to	be Us	ed <u>WATER</u>	Minimum T	est Dui	ration <u>8.</u> 1	<u>)</u> Hou	rs	■ 30% 5 ■ Pre-in	SMYS and o	3: 1 hour mir ver: 8 hours est: Refer to nutes minim	minimum A-34, Attac		
Signat	ures		10 (10 (10 (10 (10 (10 (10 (10 (10 (10 (
Prepare	ed by (si	gnatur	e) Redacted			rint Name Jacted	and P	hone	Number		Date 9/6/2013		LAN ID Redac	
Redacted	od by /s	ianatu	ral			Date , LANIE							edacted	
Test Su	Test Supervised by (signature)					그게 하고 있다고 있었다. 하는데 어린 아름이 아르고 하고 있다. 그는데 하다 내가 다른 하다는 생각이 있다.					d Date Test Actual Duration of rom Part 2) Actual Duration of Test (from Part 2)			



Use in Accordance with Numbered Document A-34, A-37, and GO 112-E

Sheet 2 of 2

Test Number 7 of 8 STPR Revision Number 0

PART 2 - TEST DATA (TO BE PREPARED BY PERSON SUPERVISING TEST AT TIME OF TEST)

		randates en biskultistikk					and the second s		
Elevation at	Max. Elevation	in Test	Section	Fī	Min. E	levation in Test Sec	ction FT		
Test Point FT	[2A] Static Hea	ad b/t T	est Point and M	lax. Elev. PSIG	[2B] Static Head b/t Test Point and Min. E				
No Spike Test: Calci	ulations and Te	st Re	suits (complete l	for strength test with	out a sp	ike test)			
Min. Required Test Press Box [1A] + Box [2A] =			Allowable Test Pro B] – Box [2B] =	어느 이 얼마나 하는 아이를 하는데 되었다.	Pressu	re Range During Test	PSIG		
[2C] Min. Test Pressure	Indicated PSIG	[2D]	Max. Test Press	ure Indicated PSIG					
Calculated Min. Test Pres Box [2C] – Box [2A] =		. Calculated Max. Test Pressure at Min. Elev. Box [2D] + Box [2B] =PSIG							
Spike Test: Calculat	ions and Test I	Result	S (complete for s	trength test with a sp	oike test)			
Spike Pressure at Test Po Box [1E] – Box [2B] =	Min. Required Test Pressure at Test Point Box [1A] + Box [2A] = PSIG				ost-Spike Pressure at] – Box [2B] =	After Spike Test			
[2E] Spike Pressure Ind	icated PSIG	[2F] Min. Test Pressure Indicated PSIG				i] Max. Post-Spike Test Pressure IndicatedPSIG			
Calculated Spike Pressur Box [2E] + Box [2B] =			lated Min. Test Pr F] – Box [2A] =	essure at Max. Elev. PSIG		ited Max. Post-Spike F 5] + Box [2B] =	Pressure at Min. Elev, PSIG		
Test Acceptance	The state of the s	110							
Were Leaks Observed′ ☐ Yes ☐ No				If yes, explain:					
Acceptable Strength To Yes No Report strength test failures		If no, explain:							
Test Medium Used	ime and Date Te	st Pres	sure Reached	Time and Date Te	est Ended Actual Duration of Test				
Test Instruments		10110000							
Make, Range, and Seri	al No. of Pressu	re Reco	ording Device			Date Last Ca	librated		
Make, Range and Seria A dead weight tester and/or or greater than 90% of SMN	an electronic press			r tests of any pipe seg	ment eq	Date Last Cal	librated		
Signatures			Land Carlotter Control	Company of the compan	P. Principal				
Test Supervised by (si	gnature)	Print Name		Date	LANID				
Testing Contractor (if t	hird party)						ı.		
Approved by (signature	Approved by (signature)					Date	LANID		

Attachments

- Test chart
- Schematic piping sketch
- Test log with pressure noted every 15 minutes

Distribution

 Gas Job Closeout Desk, 6121 Bollinger Canyon Road, Building Z1, San Ramon, CA 94583



Use in Accordance with Numbered Document A-34, A-37, and GO 112-E

Sheet 1 of 2

Test Number 8 of 8 STPR Revision Number 0

PART 1 - TEST DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER/ESTIMATOR)

	escripti umber or		n Name L-11	4			Divi	sion/	District D	iablo	Job Nun	nber 309	43472	
Purpos	e of Tes	t: Tes	t new installa	tion			MAOP to be Established by this Test 720 PSIG							
Descri	otion of F	Pipe be	eing Tested (in B" line from M	clude reference	The state of the same of the		ı ınıng, a	ind mil	e points)				Α.	
			ike test required) ormed? Ve				If no	o spik	e test for	existing fa	cility, expla	in:		
Static	Head Ca	alcula	tion											
	ım Eleva		<u>95</u> F	Г			For	Wate	r <u>0 (</u> Elev. l	Diff.) x 0.43	3 = <u>0</u> PSIG			
	ım Eleva on Differ		95 F 0 F						r Test Med e responsible	li um e engineer fo	r guidance o	n completin	g this field	
Pipe to	be Tes	ted					1			-				
Si	ze	API	or SMYS	Long Seam	JF	Footage	Ac	tual	Location	Most		% of SMY	S	
OD (in.)	WT (in.)	AST Spe	M (psi)	(ERW, DSAW, SMLS etc.)	(E)	to be Tested	Foo	tage Class		Restrictive Design Factor	At MAOP	At Min. Test Press.	At Max Test Press.	
8.625	0,322	API-	5L 3500 0	SMLS	1.00	260			3	0.5	27.55	56.52	57.78	
16,000	0.375	API-	5L 35000	SMLS	1.00	10			3	0.5	43.89	90.03	92.04	
16.000	0.312	API-	5L 52000	HFW	1.00	10			3	0.5	35.50	72.83	74,46	
			the test (exc					wall	thickness	and grade	as the pipe	• 🛛		
Pipe sp	ecs veri	fied in	field 🗌 Si	gnature of pe	rson s	apervising	test							
Compo	nent(s) l	imiting	test pressur	e/Control Poi	nt exce	ptions								
Test S	pecifica	tions	(include a spik	e test when tes	ting exi	sting faciliti	es)							
Гest Fac	tor <u>1.5</u>	[1A]	Min. Test Pres	sure at Max. E	lev. <u>147</u>	<u>7</u> PSIG	[18] Max. Test Pressure at Min. Elev. 1510 PSIG							
Spike T	est	[1C]	Spike Factor				[10]	Spik	e Pressure	at Max. Elev	. Box [1A] x [1C] =	PSIC	
(comple		[1E]	Spike Pressur	e at Min. Elev.		PSIG	(1F)	Max	. Post-Spike	Pressure a	essure at Min. Elev.			
for spike	e test)						1	Вох	[1E] x 0.95 =		PSIG			
Test Me	edium to	be Us	ed <u>WATER</u>	Minimum T	est Dui	ration <u>8.</u> () Hou	rs	■ 30% S ■ Pre-in:	30% SMYS: MYS and ov stallation Tes Test: 30 min	er: 8 hours n t: Refer to A	ninimum -34, Attachi		
Signat	ures		10 mg (10 mg)											
Prepared by (signature) Redacted						Print Name and Phone Number Redacted				ate /9/2013		AN ID dact		
edacted						rint Name dacted			Jes	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ate 1/9/1		AN ID dacted	
Test Su	pervised	i by (s	ignature)			ime and Da				ime and D		Actual Du		



Use in Accordance with Numbered Document A-34, A-37, and GO 112-E

Sheet 2 of 2

Test Number <u>8 of 8</u> STPR Revision Number <u>0</u>

PART 2 - TEST DATA (TO BE PREPARED BY PERSON SUPERVISING TEST AT TIME OF TEST)

Test Elevation				Br. Carlotte		Charles 1			
	Max. Elevation	in Test	Section	FT	Min. E	evation in Test Sectio	nFT		
Elevation at Test PointFT	[2A] Static Hea	id b/t T	est Point and M	[2B] Static Head b/t Test Point and Min. Elev					
No Spike Test: Calc	ulations and Te	st Re	sults (complete f	or strength test with	out a sp	ike test)			
Min. Required Test Press Box [1A] + Box [2A] =			Allowable Test Pre B] – Box [2B] =	경기도 되어, 보고 아이들이 사람들의 아이들은 모양이다.	Pressu	re Range During Test	PSIG		
[2C] Min. Test Pressure	[2C] Min. Test Pressure IndicatedPSIG			ure Indicated PSIG					
Calculated Min. Test Pre Box [2C] – Box [2A] =	Calculated Max. Test Pressure at Min. Elev. Box [2D] + Box [2B] =PSIG								
Spike Test: Calcula	tions and Test F	Result	S (complete for s	trength test with a sp	oike test)	1			
Spike Pressure at Test Point Box [1E] – Box [2B] = PSIG			Required Test Pres A] + Box [2A] =	ssure at Test Point PSIG	Max. Post-Spike Pressure at Test Pressure Range Point After Spike Test				
[2E] Spike Pressure In	[2F]	2F] Min. Test Pressure Indicated PSIG			Max. Post-Spike Test Pr	essure Indicated PSIG			
Calculated Spike Pressu Box [2E] + Box [2B] =			lated Min. Test Pro F] – Box [2A] =	essure at Max. Elev. PSIG	Calculated Max. Post-Spike Pressure at Min. Elev. Box [2G] + Box [2B] =PSIG				
Test Acceptance		1							
Were Leaks Observed ☐ Yes ☐ No	!?			If yes, explain:					
Acceptable Strength Yes No Report strength test failure		npliance		If no, explain:					
Test Medium Used	Γime and Date Te	st Pres	sure Reached	Time and Date To	est Ended Actual Duration of Test				
Test Instruments		and the same							
Make, Range, and Ser	ial No. of Pressu	re Rec	ording Device			Date Last Calibr	ated		
Make, Range and Ser A dead weight tester and/ or greater than 90% of SN	or an electronic press	e ight T sure rec	ester order is required fo	or tests of any pipe seg	gment eq	Date Last Calibr	ated		
Signatures									
Test Supervised by (signature) Prin			Print Name	Print Name			LANID		
Testing Contractor (if	third party)								
Approved by (signature)			Print Name			Date	LANID		

Attachments

- Test chart
- Schematic piping sketch
- Test log with pressure noted every 15 minutes

Distribution

 Gas Job Closeout Desk, 6121 Bollinger Canyon Road, Building Z1, San Ramon, CA 94583