



RCP, Inc

801 Louisiana, Ste.200
Houston, Texas 77002

Redacted

June 13, 2011

Pacific Gas and Electric Company
3600 Adobe Rd
Petaluma, Ca 94954
Attention: Joel Mannie
Attention:

Test Contractor: Akri -- PG&E 6-09-11
Asset Owner: Pacific Gas and Electric Company -- 41474079
Construction Contractor: ARB -- 0629-53-3500
Test Section: PG&E T-36A, Line 132
Test Date: June 9, 2011
Certificate Number: RCP 61362 - T-36A, L-132

To whom it may concern,

This letter is to certify that the hydrostatic test performed on pipe owned by Pacific Gas and Electric Company and tested by Akri met the requirements of the Code of Federal Regulations, Title 49, Part 192, Subpart J (Class 3).

Prior to initiation of the hydrostatic test period, the test segment was subjected to a spike pressure of 727 psig for 30 minutes, without observed leakage or yielding of the pipe segment.

This hydrostatic test was completed successfully. Pressure was maintained on the test facilities in excess of 8 continuous hours without evidence of a leak failure. Water was the test medium. At the highest elevation point in the test section, the calculated test pressure was 532 psig and the established MAOP is 354 psig.

Pressure increased 1 psi during the test. No fluid was intentionally injected or released from the test section. Net corrected volumetric change from beginning of the test to the end of the test is calculated to be 14,263.04 ounces, gain, which is equivalent to a 2.9 °F change in pipe temperature and larger than the anticipated error attributed to the temperature measurement instrumentation utilized.

Test pressure remained steady and no leaks were observed. The volumetric gain is attributed to the inherent error associated with physically attempting to measure the average temperature of 12,546 feet of buried and 118 feet of exposed pipe from a single point on the line. It is improbable that pipe temperature would track exactly with a physical

Sincerely,

Redacted

cc. file

C:\Documents and Settings\slg0\Local Settings\Temporary Internet Files\OLK6\
Test 36A.XLSM
Letter



Hydrostatic Test Certification

Company	Pacific Gas and Electric Company	Job Number	41474079
Construction Co.	ARB	Job Number	0629-53-3500
Hydro. Test Co.	Akri	Project No.	PG&E 6-09-11
Test Section	PG&E T-36A, Line 132		
File Name	RCP 61362 - T-36A, L-132		

Hydrostatic Test Pressure

APPLICABLE CODE FOR CERTIFICATION:

Test Date:

9-Jun-11

Code of Federal Regulations, Title 49, Part 192, Subpart J (Class 3)

This is to certify that the pipeline or pipeline section(s) described below was hydrostatically pressure tested in accordance with the following procedure:

Pipeline: PG&E T-36A, Line 132
From: 125+50

To: 00+00

Pipe Data

Segment	Length	Diameter	Wall Thickness	Specification	100% SMYS
1	33.00 ft	36.000 in.	0.500 in.	API5L-X65, DSAW, Arc Weld, Steel	1,806 psi
2	75.00 ft	30.000 in.	0.375 in.	API5L-X65, DSAW, Arc Weld, Steel	1,625 psi
3	8.00 ft	30.000 in.	0.375 in.	API5L-X42, DSAW, Arc Weld, Steel	1,050 psi
4	2,575 ft	36.000 in.	0.360 in.	API5L-X60, DSAW, Arc Weld, Steel	1,200 psi
5	857 ft	36.000 in.	0.360 in.	API5L-X52, DSAW, Arc Weld, Steel	1,040 psi
6	8,317 ft	30.000 in.	0.375 in.	API5L-X52, DSAW, Arc Weld, Steel	1,300 psi
7	641 ft	30.000 in.	0.313 in.	API5L-X52, DSAW, Arc Weld, Steel	1,083 psi
8	10 ft	4.500 in.	0.237 in.	API5L-Grade B, SM, Arc Weld, Steel	3,687 psi
9	148 ft	36.000 in.	0.406 in.	API5L-X52, DSAW, Arc Weld, Steel	1,173 psi

Initial Test Conditions

Pressure at Test Point:	672 psig	Date/Time:	6/9/11 3:45 PM	Pipe Temperature	
Ambient Temperature:	65.0 °F	Elevation @ Test Point:	44.0 ft	Unrestrained:	68.0 °F
Pressure @ High Point (Cal/Measure):	532 psig	Elevation @ High Point:	366.0 ft	Restrained:	61.0 °F
Pressure @ Low Point (Cal/Measure):	673 psig	Elevation @ Low Point:	41.0 ft	Location:	125+00
				Location:	25+75
				Location:	111+50

Final Test Conditions

Pressure at Test Point:	673 psig	Date/Time:	6/10/11 12:00 AM	Pipe Temperature	
Ambient Temperature:	56.0 °F	Elevation @ Test Point:	44.0 ft	Unrestrained:	62.0 °F
Pressure @ High Point (Cal/Measure):	533 psig	Elevation @ High Point:	366.0 ft	Restrained:	58.0 °F
Pressure @ Low Point (Cal/Measure):	674 psig	Elevation @ Low Point:	41.0 ft	Location:	125+00
				Location:	25+75
				Location:	111+50

Total Fluid Injected:

Total Fluid Withdrawn:

Volume gain

Net Change in Volume of the Test Section ± (+ Gain, - Loss): 14,263.04 oz **gain** 0.0222% 2.903 °F equivalent

Test Duration: 8 hours

Maximum Test Pressure: 727 psig

% SMYS @: 64.6% Test Point 51.2% High Point 64.7% Low Point

Minimum Test Pressure (Calculated/Measured): 532 psig

Maximum Allowable Operating Pressure: DOT Part 192 Test Factor= 1.50 354 psig

Were leaks observed?

No

Explain:

Acceptable Hydrostatic Test?

Yes

Prior to initiation of the hydrostatic test period, the test segment was subjected to a spike pressure of 727 psig for 30 minutes, without observed leakage or yielding of the pipe segment.

No leaks were observed during the test period. The test section included 12,546 feet of buried and 118 feet of exposed pipe. Pressure gained 1 psi during the test. The buried pipe segment lost 3°F fluid temperature and the exposed pipe segment lost 6°F.

No fluid was intentionally injected or released from the test section. Net corrected volumetric change from beginning of the test to the end of the test is calculated to be 14,263.04 ounces, gain, which is equivalent to a 2.9 °F change in pipe temperature and larger than the anticipated error attributed to the temperature measurement instrumentation utilized.

Test pressure remained steady and no leaks were observed. The volumetric gain is attributed to the inherent error associated with physically attempting to measure the average temperature of 12,546 feet of buried and 118 feet of exposed pipe from a single point on the line. It is improbable that pipe temperature would track exactly with a physical leak, resulting in a steady pressure profile; therefore, the observed steady pressure suggests that pipe temperature remained steady as well.

Remarks

Redacted

13-Jun-11



Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41474079
Construction Co.	ARB	Job Number	0629-53-3500
Testing Co.	Akri	Project No.	PG&E 6-09-11
Test Section	PG&E T-36A, Line 132		
File Name	RCP 61362 - T-36A, L-132		

Date	9-Jun-11	Test Log
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Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject
					Unrestrained	Restrained			
1	6/9/11	9:05 AM	488 psig	59 °F	60 °F	60 °F	Start Spike		
2	6/9/11	9:06 AM	498 psig	59 °F	60 °F	60 °F			5,161 oz.
3	6/9/11	9:11 AM	508 psig	59 °F	60 °F	60 °F			3,432 oz.
4	6/9/11	9:14 AM	518 psig	59 °F	60 °F	60 °F			2,864 oz.
5	6/9/11	9:17 AM	528 psig	59 °F	60 °F	60 °F			5,522 oz.
6	6/9/11	9:18 AM	538 psig	59 °F	60 °F	60 °F			3,045 oz.
7	6/9/11	9:19 AM	548 psig	59 °F	60 °F	60 °F			5,780 oz.
8	6/9/11	9:21 AM	558 psig	59 °F	60 °F	60 °F			3,871 oz.
9	6/9/11	9:23 AM	568 psig	59 °F	60 °F	60 °F			4,387 oz.
10	6/9/11	9:25 AM	578 psig	59 °F	60 °F	60 °F			4,129 oz.
11	6/9/11	9:27 AM	588 psig	59 °F	60 °F	60 °F			4,542 oz.
12	6/9/11	9:29 AM	598 psig	59 °F	60 °F	60 °F			3,819 oz.
13	6/9/11	9:31 AM	608 psig	59 °F	60 °F	60 °F			3,871 oz.
14	6/9/11	9:33 AM	618 psig	59 °F	60 °F	60 °F			3,252 oz.
15	6/9/11	9:35 AM	628 psig	59 °F	60 °F	60 °F			4,284 oz.
16	6/9/11	9:37 AM	638 psig	59 °F	60 °F	60 °F			3,458 oz.
17	6/9/11	9:39 AM	648 psig	59 °F	60 °F	60 °F			3,922 oz.
18	6/9/11	9:41 AM	658 psig	59 °F	60 °F	60 °F			3,613 oz.
19	6/9/11	9:43 AM	668 psig	59 °F	60 °F	60 °F			3,664 oz.
20	6/9/11	9:45 AM	678 psig	59 °F	60 °F	60 °F			3,922 oz.
21	6/9/11	9:48 AM	688 psig	59 °F	60 °F	60 °F			2,942 oz.
22	6/9/11	9:51 AM	698 psig	59 °F	60 °F	60 °F			3,200 oz.
23	6/9/11	9:55 AM	708 psig	59 °F	60 °F	60 °F			3,510 oz.
24	6/9/11	9:59 AM	718 psig	59 °F	60 °F	60 °F			3,252 oz.
25	6/9/11	10:00 AM	727 psig	67 °F	60 °F	61 °F			3,252 oz.
26	6/9/11	10:10 AM	727 psig	68 °F	60 °F	61 °F			
27	6/9/11	10:20 AM	726 psig	74 °F	62 °F	60 °F			
28	6/9/11	10:30 AM	726 psig	75 °F	62 °F	60 °F			
29	6/9/11	10:40 AM	726 psig	76 °F	62 °F	60 °F	End Spike		
30	6/9/11	10:50 AM	726 psig	76 °F	62 °F	60 °F			
31	6/9/11	11:00 AM	726 psig	76 °F	62 °F	60 °F			
32	6/9/11	11:14 AM	726 psig	76 °F	62 °F	60 °F	Bleed		
33	6/9/11	11:25 AM	716 psig	76 °F	63 °F	60 °F		3,878 oz.	
34	6/9/11	11:35 AM	706 psig	76 °F	63 °F	60 °F		3,878 oz.	
35	6/9/11	11:47 AM	670 psig	76 °F	63 °F	60 °F		13,962 oz.	
36	6/9/11	3:45 PM	672 psig	65 °F	68 °F	61 °F	Partly Cloud	On Test	
37	6/9/11	4:00 PM	671 psig	66 °F	68 °F	61 °F			
38	6/9/11	4:15 PM	672 psig	65 °F	68 °F	61 °F			
39	6/9/11	4:30 PM	672 psig	64 °F	68 °F	61 °F			
40	6/9/11	4:45 PM	671 psig	62 °F	68 °F	61 °F			
41	6/9/11	5:00 PM	671 psig	60 °F	67 °F	61 °F	Partly Cloudy		
42	6/9/11	5:15 PM	671 psig	61 °F	67 °F	61 °F			
43	6/9/11	5:30 PM	671 psig	59 °F	66 °F	60 °F			



Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41474079
Construction Co.	ARB	Job Number	0629-53-3500
Testing Co.	Akri	Project No.	PG&E 6-09-11
Test Section	PG&E T-36A, Line 132		
File Name	RCP 61362 - T-36A, L-132		

Date	9-Jun-11	Test Log
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Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject
					Unrestrained	Restrained			
44	6/9/11	5:45 PM	671 psig	60 °F	66 °F	60 °F			
45	6/9/11	6:00 PM	671 psig	59 °F	66 °F	60 °F			
46	6/9/11	6:15 PM	671 psig	59 °F	65 °F	60 °F			
47	6/9/11	6:30 PM	671 psig	63 °F	65 °F	60 °F			
48	6/9/11	6:45 PM	671 psig	58 °F	65 °F	60 °F			
49	6/9/11	7:00 PM	671 psig	58 °F	65 °F	60 °F			
50	6/9/11	7:15 PM	671 psig	57 °F	64 °F	60 °F			
51	6/9/11	7:30 PM	671 psig	57 °F	64 °F	60 °F			
52	6/9/11	7:45 PM	671 psig	57 °F	64 °F	60 °F			
53	6/9/11	8:00 PM	671 psig	57 °F	63 °F	59 °F			
54	6/9/11	8:15 PM	671 psig	56 °F	63 °F	59 °F			
55	6/9/11	8:30 PM	671 psig	56 °F	63 °F	59 °F			
56	6/9/11	8:45 PM	671 psig	56 °F	63 °F	59 °F	Cloud Cover		
57	6/9/11	9:00 PM	671 psig	56 °F	63 °F	59 °F			
58	6/9/11	9:15 PM	672 psig	56 °F	62 °F	59 °F			
59	6/9/11	9:30 PM	672 psig	56 °F	62 °F	59 °F			
60	6/9/11	9:45 PM	672 psig	56 °F	62 °F	59 °F			
61	6/9/11	10:00 PM	672 psig	56 °F	62 °F	59 °F			
62	6/9/11	10:15 PM	673 psig	56 °F	62 °F	59 °F			
63	6/9/11	10:30 PM	673 psig	56 °F	62 °F	59 °F			
64	6/9/11	10:45 PM	673 psig	56 °F	62 °F	59 °F			
65	6/9/11	11:00 PM	673 psig	56 °F	62 °F	59 °F			
66	6/9/11	11:15 PM	673 psig	56 °F	62 °F	59 °F			
67	6/9/11	11:30 PM	673 psig	56 °F	62 °F	58 °F			
68	6/9/11	11:45 PM	673 psig	56 °F	62 °F	58 °F			
69	6/10/11	12:00 AM	673 psig	56 °F	62 °F	58 °F	Cloud Cover End of Test		



Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41474079
Construction Co.	ARB	Job Number	0629-53-3500
Testing Co.	Akri	Project No.	PG&E 6-09-11
Test Section	PG&E T-36A, Line 132		
File Name	RCP 61362 - T-36A, L-132		

Date	9-Jun-11	<h3>Test Log</h3>
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Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject
					Unrestrained	Restrained			
Spike Test							21,719.0 oz.	92,693.8 oz.	
Hydrostatic Test									

Were leaks observed during the test period?	Exposed and buried pipe, no leaks observed.	<table border="1" style="float: right; border-collapse: collapse;"> <tr> <td style="padding: 2px;">High Test Pressure:</td> <td style="text-align: right; padding: 2px;">673 psig</td> </tr> <tr> <td style="padding: 2px;">Low Test Pressure:</td> <td style="text-align: right; padding: 2px;">671 psig</td> </tr> </table>	High Test Pressure:	673 psig	Low Test Pressure:	671 psig
High Test Pressure:	673 psig					
Low Test Pressure:	671 psig					



Pipe Segment Volume Calculations

Company	Pacific Gas and Electric Company	Job Number	41474079
Construction Co.	ARB	Job Number	0629-53-3500
Hydro. Test Co.	Akri	Project No.	PG&E 6-09-11
Test Section	PG&E T-36A, Line 132	WATER	
File Name	RCP 61362 - T-36A, L-132		

General Pipe Data

Description	Segment								
	1	2	3	4	5	6	7	8	9
Restrained or Unrestrained?	Unrestrained	Unrestrained	Restrained	Restrained	Restrained	Restrained	Restrained	Unrestrained	Restrained
Outside Diameter	36.000 in.	30.000 in.	30.000 in.	36.000 in.	36.000 in.	30.000 in.	30.000 in.	4.500 in.	36.000 in.
Wall Thickness	0.500 in.	0.375 in.	0.375 in.	0.360 in.	0.360 in.	0.375 in.	0.313 in.	0.237 in.	0.406 in.
Inside Diameter	35.000 in.	29.250 in.	29.250 in.	35.280 in.	35.280 in.	29.250 in.	29.375 in.	4.026 in.	35.188 in.
Spec./Grade	API5L-X65	API5L-X65	API5L-X42	API5L-X60	API5L-X52	API5L-X52	API5L-X52	API5L-Grade B	API5L-X52
Length Unrestrained	33 ft	75 ft						10 ft	
Length Restrained			8 ft	2,575 ft	857 ft	8,317 ft	641 ft		148 ft
Temperature -- On Test	68 °F	68 °F	61.0 °F	61.0 °F	61.0 °F	61.0 °F	61.0 °F	68.0 °F	61.0 °F
Temperature -- End of Test	62 °F	62 °F	58.0 °F	58.0 °F	58.0 °F	58.0 °F	58.0 °F	62.0 °F	58.0 °F
Pressure -- On Test	672 psig	672 psig	672 psig	672 psig	672 psig	672 psig	672 psig	672 psig	672 psig
Pressure -- End of Test	673 psig	673 psig	673 psig	673 psig	673 psig	673 psig	673 psig	673 psig	673 psig

Unrestrained Pipe

Sum:	Vo			Vtp1			Vtp2		
		4,273.96 gal			4,288.91 gal				4,291.14 gal
		547,067 oz.			548,980 oz.				549,266 oz.
Vo Unrestrained	1,649 gal	2,618 gal						7 gal	
Fwp 1	1.002057	1.002057						1.002057	
Fpp 1	1.001960	1.002184						1.000476	
Fpt 1	1.000146	1.000146						1.000146	
Fwt 1	1.000803	1.000803						1.000803	
Fpwt 1 = Fpt/Fwt	0.999343	0.999343						0.999343	
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	1,654.88 gal	2,627.40 gal						6.63 gal	
Fwp 2	1.002060	1.002060						1.002060	
Fpp 2	1.001963	1.002187						1.000476	
Fpt 2	1.000036	1.000036						1.000036	
Fwt 2	1.000181	1.000181						1.000181	
Fpwt = Fpt/Fwt	0.999856	0.999856						0.999856	
Vtp = Vo(Fwp)(Fpp)(Fpwt)	1,655.74 gal	2,628.77 gal						6.63 gal	

Restrained Pipe

Sum:	Vo			Vtp1			Vtp2		
		494,929.77 gal			496,784.26 gal				496,893.46 gal
		63,351,010 oz.			63,588,385 oz.				63,602,363 oz.
Vo Unrestrained			279 gal	130,766 gal	43,521 gal	290,320 gal	22,567 gal		7,477 gal
Fwp 1			1.002057	1.002057	1.002057	1.002057	1.002057		1.002057
Fpp 1			1.001594	1.002001	1.002001	1.001594	1.001920		1.001770
Fpt 1			1.000012	1.000012	1.000012	1.000012	1.000012		1.000012
Fwt 1			1.000080	1.000080	1.000080	1.000080	1.000080		1.000080
Fpwt 1 = Fpt/Fwt			0.999932	0.999932	0.999932	0.999932	0.999932		0.999932
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)			280 gal	131,288 gal	43,695 gal	291,361 gal	22,655 gal		7,505 gal
Fwp 2			1.002060	1.002060	1.002060	1.002060	1.002060		1.002060
Fpp 2			1.001585	1.001993	1.001993	1.001585	1.001912		1.001762
Fpt 2			0.999976	0.999976	0.999976	0.999976	0.999976		0.999976
Fwt 2			0.999819	0.999819	0.999819	0.999819	0.999819		0.999819
Fpwt = Fpt/Fwt			1.000157	1.000157	1.000157	1.000157	1.000157		1.000157
Vtp = Vo(Fwp)(Fpp)(Fpwt)			280 gal	131,317 gal	43,704 gal	291,425 gal	22,660 gal		7,506 gal

Combined Pipe

Sum:	Vo			Vtp1			Vtp2		
		499,203.73 gal			501,073.17 gal				501,184.60 gal
		63,898,077 oz.			64,137,366 oz.				64,151,629 oz.



Pipe Segment Volume Allowance Calculations

Company	Pacific Gas and Electric Company	Job Number	41474079
Construction Co.	ARB	Job Number	0629-53-3500
Hydro. Test Co.	Akri	Project No.	PG&E 6-09-11
Test Section	PG&E T-36A, Line 132		WATER
File Name	RCP 61362 - T-36A, L-132		

General Pipe Data

Description	Segment								
	1	2	3	4	5	6	7	8	9
Restrained or Unrestrained?	Unrestrained	Unrestrained	Restrained	Restrained	Restrained	Restrained	Restrained	Unrestrained	Restrained
Outside Diameter	36.000 in.	30.000 in.	30.000 in.	36.000 in.	36.000 in.	30.000 in.	30.000 in.	4.500 in.	36.000 in.
Wall Thickness	0.500 in.	0.375 in.	0.375 in.	0.360 in.	0.360 in.	0.375 in.	0.313 in.	0.237 in.	0.406 in.
Inside Diameter	35.000 in.	29.250 in.	29.250 in.	35.280 in.	35.280 in.	29.250 in.	29.375 in.	4.026 in.	35.188 in.
Spec./Grade	API5L-X65	API5L-X65	API5L-X42	API5L-X60	API5L-X52	API5L-X52	API5L-X52	API5L-Grade B	API5L-X52
Length Unstrained	33.00 ft	75.00 ft						10 ft	
Length Restrained			8 ft	2,575 ft	857 ft	8,317 ft	641 ft		148 ft
Temperature -- On Test	64 °F	64 °F	59 °F	59 °F	59 °F	59 °F	59 °F	64 °F	59 °F
Temperature -- End of Test	65 °F	65 °F	60 °F	60 °F	60 °F	60 °F	60 °F	65 °F	60 °F
Pressure -- On Test									
Pressure -- End of Test									

Unrestrained Pipe

Sum:	Vo	4,273.96 gal 547,067 oz.	Vtp1	4,272.67 gal 546,902 oz.	Vtp2	4,272.36 gal 546,862 oz.
Vo Unrestrained	1,649 gal	2,618 gal				7 gal
Fwp 1	1.000000	1.000000				1.000000
Fpp 1	1.000000	1.000000				1.000000
Fpt 1	1.000073	1.000073				1.000073
Fwt 1	1.000375	1.000375				1.000375
Fpwt 1 = Fpt/Fwt	0.999698	0.999698				0.999698
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	1,648.84 gal	2,617.23 gal				7 gal
Fwp 2	1.000000	1.000000				1.000000
Fpp 2	1.000000	1.000000				1.000000
Fpt 2	1.000091	1.000091				1.000091
Fwt 2	1.000467	1.000467				1.000467
Fpwt = Fpt/Fwt	0.999624	0.999624				0.999624
Vtp = Vo(Fwp)(Fpp)(Fpwt)	1,648.72 gal	2,617.03 gal				7 gal

Restrained Pipe

Sum:	Vo	494,929.77 gal 63,351,010 oz.	Vtp1	494,967.83 gal 63,355,882 oz.	Vtp2	494,929.77 gal 63,351,010 oz.		
Vo Restrained			279 gal	130,766 gal	43,521 gal	290,320 gal	22,567 gal	7,477 gal
Fwp 1			1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Fpp 1			0.999996	0.999996	0.999996	0.999996	0.999996	0.999996
Fpt 1			0.999988	0.999988	0.999988	0.999988	0.999988	0.999988
Fwt 1			0.999907	0.999907	0.999907	0.999907	0.999907	0.999907
Fpwt 1 = Fpt/Fwt			1.000081	1.000081	1.000081	1.000081	1.000081	1.000081
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)			279 gal	130,776 gal	43,524 gal	290,343 gal	22,569 gal	7,477 gal
Fwp 2			1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Fpp 2			1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Fpt 2			1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Fwt 2			1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Fpwt = Fpt/Fwt			1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Vtp = Vo(Fwp)(Fpp)(Fpwt)			279 gal	130,766 gal	43,521 gal	290,320 gal	22,567 gal	7,477 gal

Combined Pipe

Sum:	Vo	499,203.73 gal 63,898,077 oz.	Vtp1	499,240.50 gal 63,902,785 oz.	Vtp2	499,202.12 gal 63,897,872 oz.
1 °F Change	38.38 gal					4,912.92 oz.



Hydrostatic Test Pipe Data Table

Pipe Type	Length	Restrained / Unrestrained	Outside Diameter	Wall Thickness	Specification & Grade	Pipe Yield Pressure	Material	Joint Type	Seam Type
1	33 ft	Unrestrained	36.000 in.	0.5000 in.	API5L-X65	1,806 psig	Steel	Arc Weld	DSAW
2	75 ft	Unrestrained	30.000 in.	0.3750 in.	API5L-X65	1,625 psig	Steel	Arc Weld	DSAW
3	8 ft	Restrained	30.000 in.	0.3750 in.	API5L-X42	1,050 psig	Steel	Arc Weld	DSAW
4	2,575 ft	Restrained	36.000 in.	0.3600 in.	API5L-X60	1,200 psig	Steel	Arc Weld	DSAW
5	857 ft	Restrained	36.000 in.	0.3600 in.	API5L-X52	1,040 psig	Steel	Arc Weld	DSAW
6	8,317 ft	Restrained	30.000 in.	0.3750 in.	API5L-X52	1,300 psig	Steel	Arc Weld	DSAW
7	641 ft	Restrained	30.000 in.	0.3125 in.	API5L-X52	1,083 psig	Steel	Arc Weld	DSAW
8	10 ft	Unrestrained	4.500 in.	0.2370 in.	API5L-Grade B	3,687 psig	Steel	Arc Weld	SM
9	148 ft	Restrained	36.000 in.	0.4060 in.	API5L-X52	1,173 psig	Steel	Arc Weld	DSAW

Hydrostatic Test Project Owner & Participants

Owner Company	Pacific Gas and Electric Company	Job Number
Address	3600 Adobe Rd	41474079
	Petaluma, Ca 94954	
	Attention: Joel Mannie	
Construction Company	ARB	Job Number
Address	1875 Loveridge Road	0629-53-3500
	Pittsburg, CA 94565	
	Attention: Redacted	
Hydrostatic Test Co.	Akri	Project No.
Address	1414 Valhalla Drive	PG&E 6-09-11
	Bakerfield, CA 93309	
	Attention: Redacted	
Test Section	PG&E T-36A, Line 132	
	From: 125+50	
	To: 00+00	
File Name	RCP 61362 - T-36A, L-132	

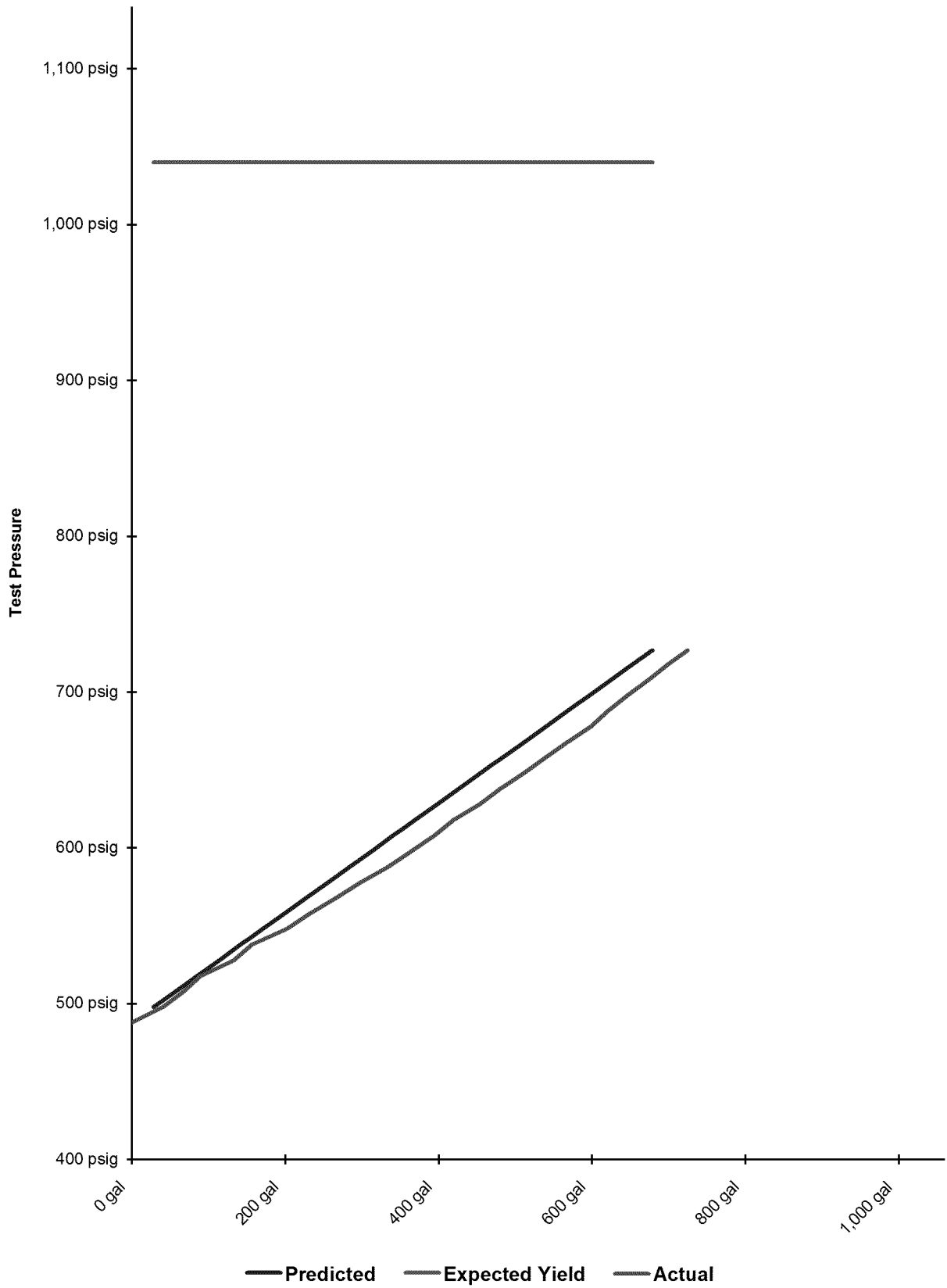
RCP

PG&E T-36A, Line 132



Test Pressure Ambient Temperature
Unrestrained Pipe Temperature Restrained Pipe Temperature

**Spike Pressure Test
Stress Strain Curve -- PG&E T-36A, Line 132**



Work in Progress

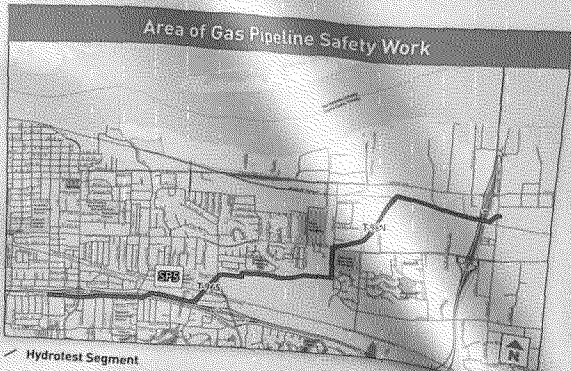
If you have any questions about this work please visit www.pge.com/gassystem or call us at 1-888-743-7431

Pacific Gas and Electric Company's highest responsibility in 2011 and beyond is to enhance the safety of our operations. As part of this effort, PG&E is performing a hydrostatic pressure test on a section of natural gas pipeline. Work will last a few weeks.

A hydrostatic pressure test involves pressurizing a section of pipe with water to a much higher level than the pipe will ever operate at with natural gas. This verifies the capability of a pipeline to safely operate and can also reveal weaknesses that could lead to defects and leaks. If the pipe section does not meet acceptable standards during the test, it will be replaced with new pipe that has already passed a pressure test.

Para ayuda en español por favor llame al 1-800-660-6789.
要用粵語/國語請求協助, 請致電 1-800-893-9555.
Kung kailangang makipag-usap sa nakakasalita ng Tagalog, tumawag sa 1-888-743-7431.
Để được giúp đỡ bằng tiếng Việt, xin gọi 1-800-298-8438.

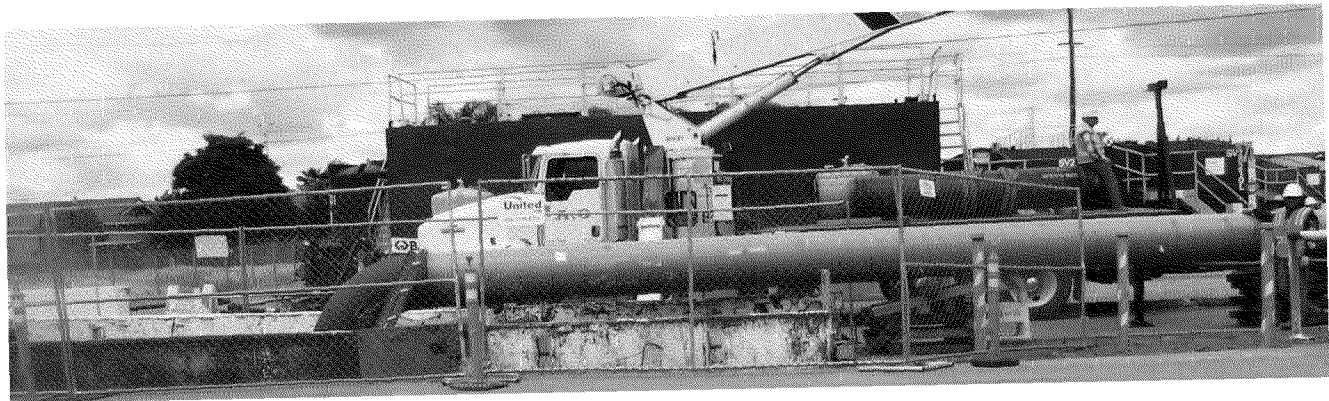
Area of Gas Pipeline Safety Work



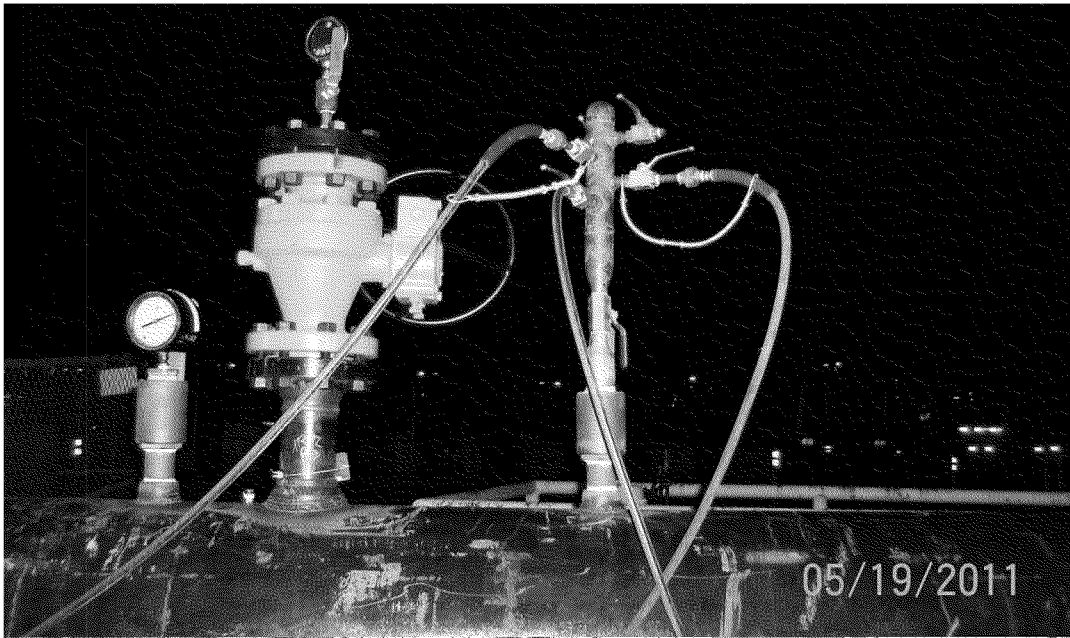
Hydrotest Segment

RCP

Test Section 96B Map



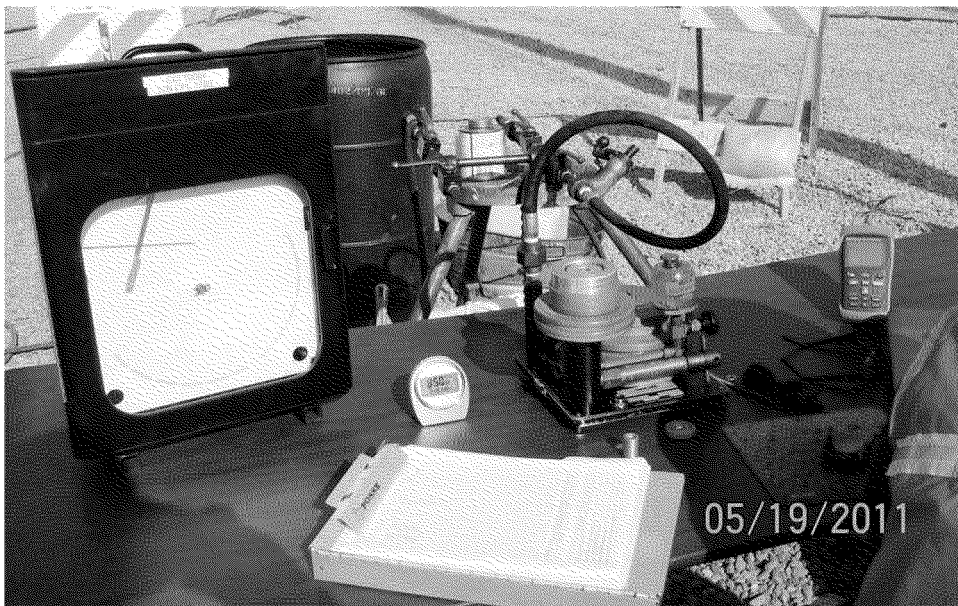
Unrestrained Pipe Segment Test Section 96B



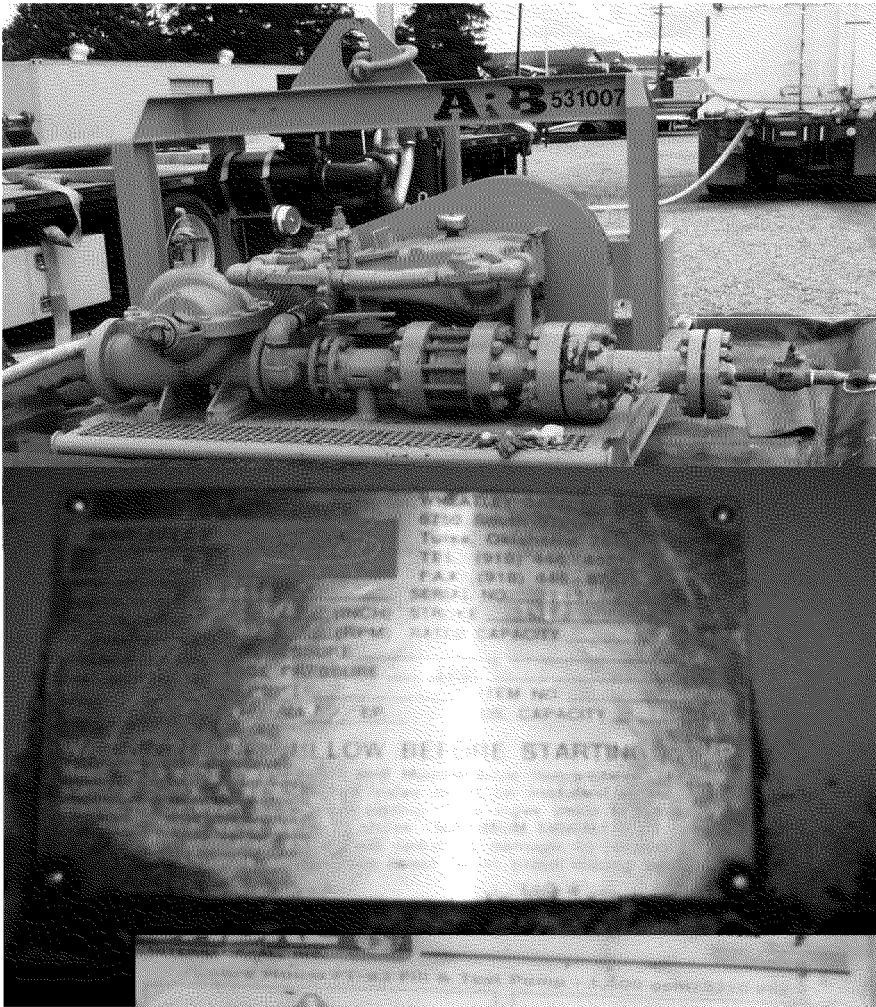
Test Segment 96B
Test Header and
pressure Monitor
Connection



Unrestrained Pipe Temperature Recorder Chart



Test Segment 96B
Pressure Chart
Recorder, Dead
Weight Tester and
Fluke Ambient
Temperature
Electronic
Thermometer



Test Segment 96B Pressure Pump with Documentation

