



RCP, Inc

801 Louisiana, Ste.200
Houston, Texas 77002
(713)655-8080

Redacted

November 13, 2011

Pacific Gas and Electric Company
350 N. Wiget
Wainut Creek, CA 94598
Attention: Redacted

Test Contractor:	AKRI -- T-112 11/13/11
Asset Owner:	Pacific Gas and Electric Company -- 41497367
Construction Contractor:	ARB -- 0629-53-3500 T-112
Test Section:	PG&E T-112 , L-191, MP 9.47- 10.58
Test Date:	November 13, 2011
Certificate Number:	RCP 61362 - T-112, L-191, MP 9.47 - 10.58

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).

The test segment was subjected to a spike pressure test of 746 psig for 30 minutes, without observed leakage or yielding of the pipe segment. The 30 minute spike test and subsequent pressure reduction with volume bleed was included and is part of the 10.25 hour test duration period.

This hydrostatic test was completed successfully. Pressure was maintained on the test facilities in excess of 10.25 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 674 psig and the MAOP per 49 CFR Part 192, Subpart J can be as high as 449 psig. The MAOP established by this test is sufficient to qualify for Pacific Gas and Electric Company's desired MAOP of 390 psig.

Pressure decreased 55 psi during the test. 4,569.60 ounces of fluid was intentionally released from the test section. Net corrected volumetric change from beginning of the test to the end of the test is calculated to be 535.42 ounces, loss, which is equivalent to a 0.34 °F change in pipe temperature and within the error attributed to the temperature measurement instrumentation utilized.

Test pressure did not remain steady even though no leaks were observed. The volumetric loss is attributed to the error characteristic of the temperature measurement instrumentation utilized.

Sincerely,

Redacted

Randy W. Beggs

cc. file

C:\Users\Redac\Documents\PG&E Pressure tests\T-112\
Test 112
Letter



Hydrostatic Test Certification

Company	Pacific Gas and Electric Company	Job Number	41497367
Construction Co.	ARB	Job Number	0629-53-3500 T-112
Hydro. Test Co.	AKRI	Project No.	T-112 11/13/11
Test Section	PG&E T-112, L-191, MP 9.47- 10.58		
File Name	RCP 61362 - T-112, L-191, MP 9.47 - 10.58		

Hydrostatic Test Pressure

APPLICABLE CODE FOR CERTIFICATION:

Test Date:

13-Nov-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-112, L-191, MP 9.47- 10.58

From: 58+97.15

To: 0+05.3

Pipe Data

Segment	Length	Diameter	Wall Thickness	Specification	100% SMYS
1	38.90 ft	24.000 in.	0.375 in.	API5L-X60, DSAW, Arc Weld, Steel	1,875 psi
2	28.00 ft	24.000 in.	0.500 in.	API5L-X60, DSAW, Arc Weld, Steel	2,500 psi
3	5,820.70 ft	24.000 in.	0.313 in.	API5L-X42, DSAW, Arc Weld, Steel	1,094 psi
4	71.00 ft	24.000 in.	0.500 in.	API5L-Grade B, DSAW, Arc Weld, Steel	1,458 psi
5	5.00 ft	3.500 in.	0.216 in.	API5L-Grade B, SM, Arc Weld, Steel	4,320 psi
6	20.00 ft	24.000 in.	0.375 in.	API5L-X65, DSAW, Arc Weld, Steel	2,031 psi

Initial Test Conditions

Pressure at Test Point:	746 psig	Date/Time:	11/13/11 9:15 AM	Pipe Temperature	
Ambient Temperature:	59.0 °F	Elevation @ Test Point:	1.0 ft	Unrestrained:	61.0 °F
Pressure @ High Point (Cal/Measure):	729 psig	Elevation @ High Point:	40.0 ft	Restrained:	64.0 °F
Pressure @ Low Point (Cal/Measure):	746 psig	Elevation @ Low Point:	0.0 ft	Location:	58+97.15
				Location:	0+05.3
				Location:	46+00

Final Test Conditions

Pressure at Test Point:	691 psig	Date/Time:	11/13/11 7:30 PM	Pipe Temperature	
Ambient Temperature:	56.0 °F	Elevation @ Test Point:	1.0 ft	Unrestrained:	66.0 °F
Pressure @ High Point (Cal/Measure):	674 psig	Elevation @ High Point:	40.0 ft	Restrained:	64.0 °F
Pressure @ Low Point (Cal/Measure):	691 psig	Elevation @ Low Point:	0.0 ft	Location:	58+97.15
				Location:	0+05.3
				Location:	46+00

Total Fluid Injected:

Total Fluid Withdrawn: 4569.60 fluid ounces

Volume loss

Net Change in Volume of the Test Section ± (+ Gain, - Loss):

(535.42) oz

loss

0.0031%

(0.34) °F equivalent

Test Duration: 10.25 hours

Minimum Test Pressure:	691 psig	Max Elevation	674 psig	Min Elevation	691 psig
Maximum Test Pressure:	746 psig		729 psig		746 psig
% SMYS:			35.9%		
Test Segment Observed % SMYS:	Minimum	17.1%	Maximum	68.2%	

Minimum Test Pressure (Calculated/Measured):

674 psig

Maximum Allowable Operating Pressure:

DOT Part 192

Test Factor= 1.50

449 psig

The MAOP established by this test is sufficient to qualify for Pacific Gas and Electric Company's desired MAOP of 390 psig.

Were leaks observed?	No	Explain:
Acceptable Hydrostatic Test?	Yes	<p>The test segment was subjected to a spike pressure test of 746 psig for 30 minutes, without observed leakage or yielding of the pipe segment. The 30 minute spike test and subsequent pressure reduction with volume bleed was included and is part of the 10.25 hour test duration period.</p> <p>No leaks were observed during the test period. The test section included 5,897 feet of buried and 87 feet of exposed pipe. Pressure lost 55 psi during the test. The buried pipe segment fluid temperature remained steady and the exposed pipe segment gained 5°F.</p> <p>4,569.60 ounces of fluid was intentionally released from the test section. Net corrected volumetric change from beginning of the test to the end of the test is calculated to be 535.42 ounces, loss, which is equivalent to a 0.34 °F change in pipe temperature and within the error attributed to the temperature measurement instrumentation utilized.</p> <p>Test pressure did not remain steady even though no leaks were observed. The volumetric loss is attributed to the error characteristic of the temperature measurement instrumentation utilized.</p>
Remarks	Test length of 10 hour and 15 minutes due to 1 degree pipe (restrained) temperature increase at 12:00 noon to 65 degrees. Restrained temperature decreased 1 degree at 7:00 p.m. to 64 degrees. Test completed successfully.	

Redacted

13-Nov-11



Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41497367
Construction Co.	ARB	Job Number	0629-53-3500 T-112
Testing Co.	AKRI	Project No.	T-112 11/13/11
Test Section	PG&E T-112, L-191, MP 9.47- 10.58		
File Name	RCP 61362 - T-112, L-191, MP 9.47 - 10.58		

Date		13-Nov-11		Test Log					
Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject
					Unrestrained	Restrained			
1	11/13/11	8:55 AM	510 psig	59 °F	61 °F	64 °F	Start Spike		
2	11/13/11	8:55 AM	520 psig	59 °F	61 °F	64 °F	Inject		1,177 oz.
3	11/13/11	8:55 AM	530 psig	59 °F	61 °F	64 °F	Inject		811 oz.
4	11/13/11	8:55 AM	540 psig	59 °F	61 °F	64 °F	Inject		917 oz.
5	11/13/11	8:55 AM	550 psig	59 °F	61 °F	64 °F	Inject		896 oz.
6	11/13/11	8:55 AM	560 psig	59 °F	61 °F	64 °F	Inject		864 oz.
7	11/13/11	8:56 AM	570 psig	59 °F	61 °F	64 °F	Inject		901 oz.
8	11/13/11	8:57 AM	580 psig	59 °F	61 °F	64 °F	Inject		901 oz.
9	11/13/11	8:58 AM	590 psig	59 °F	61 °F	64 °F	Inject		874 oz.
10	11/13/11	8:59 AM	600 psig	59 °F	61 °F	64 °F	Inject		927 oz.
11	11/13/11	9:00 AM	610 psig	59 °F	61 °F	64 °F	Inject		821 oz.
12	11/13/11	9:01 AM	620 psig	59 °F	61 °F	64 °F	Inject		832 oz.
13	11/13/11	9:02 AM	630 psig	59 °F	61 °F	64 °F	Inject		901 oz.
14	11/13/11	9:03 AM	640 psig	59 °F	61 °F	64 °F	Inject		869 oz.
15	11/13/11	9:04 AM	650 psig	59 °F	61 °F	64 °F	Inject		949 oz.
16	11/13/11	9:05 AM	660 psig	59 °F	61 °F	64 °F	Inject		901 oz.
17	11/13/11	9:06 AM	670 psig	59 °F	61 °F	64 °F	Inject		906 oz.
18	11/13/11	9:07 AM	680 psig	59 °F	61 °F	64 °F	Inject		869 oz.
19	11/13/11	9:08 AM	690 psig	59 °F	61 °F	64 °F	Inject		795 oz.
20	11/13/11	9:09 AM	700 psig	59 °F	61 °F	64 °F	Inject		943 oz.
21	11/13/11	9:10 AM	710 psig	59 °F	61 °F	64 °F	Inject		912 oz.
22	11/13/11	9:11 AM	720 psig	59 °F	61 °F	64 °F	Inject		980 oz.
23	11/13/11	9:12 AM	730 psig	59 °F	61 °F	64 °F	Inject		821 oz.
24	11/13/11	9:13 AM	740 psig	59 °F	61 °F	64 °F	Inject		795 oz.
25	11/13/11	9:14 AM	746 psig	59 °F	61 °F	64 °F	Inject		583 oz.
26	11/13/11	9:15 AM	746 psig	59 °F	61 °F	64 °F	On Test		
27	11/13/11	9:25 AM	746 psig	60 °F	61 °F	64 °F			
28	11/13/11	9:35 AM	746 psig	61 °F	62 °F	64 °F			
29	11/13/11	9:45 AM	746 psig	63 °F	63 °F	64 °F	End Spike		
30	11/13/11	9:49 AM	736 psig	61 °F	63 °F	64 °F	Bleed	896 oz.	
31	11/13/11	9:52 AM	726 psig	61 °F	63 °F	64 °F	Bleed	896 oz.	
32	11/13/11	9:55 AM	716 psig	61 °F	63 °F	64 °F	Bleed	896 oz.	
33	11/13/11	9:57 AM	706 psig	61 °F	63 °F	64 °F	Bleed	896 oz.	
34	11/13/11	9:59 AM	696 psig	61 °F	63 °F	64 °F	Bleed	896 oz.	
35	11/13/11	10:00 AM	695 psig	61 °F	63 °F	64 °F	Bleed	90 oz.	
36	11/13/11	10:15 AM	695 psig	61 °F	63 °F	64 °F			
37	11/13/11	10:30 AM	695 psig	67 °F	63 °F	64 °F	Partly Cloudy		
38	11/13/11	10:45 AM	695 psig	66 °F	64 °F	64 °F			
39	11/13/11	11:00 AM	695 psig	63 °F	64 °F	64 °F			
40	11/13/11	11:15 AM	695 psig	69 °F	65 °F	64 °F			
41	11/13/11	11:30 AM	695 psig	66 °F	65 °F	64 °F	Partly Cloudy		
42	11/13/11	11:45 AM	695 psig	70 °F	65 °F	64 °F			
43	11/13/11	12:00 PM	695 psig	69 °F	66 °F	65 °F			
44	11/13/11	12:15 PM	695 psig	67 °F	66 °F	65 °F			
45	11/13/11	12:30 PM	695 psig	71 °F	67 °F	65 °F			
46	11/13/11	12:45 PM	695 psig	72 °F	67 °F	65 °F	Partly Cloudy		
47	11/13/11	1:00 PM	695 psig	77 °F	67 °F	65 °F			



Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41497367
Construction Co.	ARB	Job Number	0629-53-3500 T-112
Testing Co.	AKRI	Project No.	T-112 11/13/11
Test Section	PG&E T-112, L-191, MP 9.47- 10.58		
File Name	RCP 61362 - T-112, L-191, MP 9.47 - 10.58		

Date		Test Log											
Log No.	Test Period		Test Pressure	Temperature °F			Remarks						
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject				
					Unrestrained	Restrained							
48	11/13/11	1:15 PM	695 psig	77 °F	67 °F	65 °F							
49	11/13/11	1:30 PM	696 psig	76 °F	67 °F	65 °F							
50	11/13/11	1:45 PM	696 psig	77 °F	67 °F	65 °F							
51	11/13/11	2:00 PM	696 psig	71 °F	67 °F	65 °F							
52	11/13/11	2:15 PM	696 psig	68 °F	67 °F	65 °F							
53	11/13/11	2:30 PM	696 psig	70 °F	68 °F	65 °F	Sun Shine						
54	11/13/11	2:45 PM	696 psig	70 °F	68 °F	65 °F							
55	11/13/11	3:00 PM	696 psig	66 °F	68 °F	65 °F							
56	11/13/11	3:15 PM	695 psig	66 °F	68 °F	65 °F							
57	11/13/11	3:30 PM	695 psig	72 °F	68 °F	65 °F							
58	11/13/11	3:45 PM	695 psig	69 °F	68 °F	65 °F							
59	11/13/11	4:00 PM	694 psig	66 °F	68 °F	65 °F							
60	11/13/11	4:15 PM	694 psig	68 °F	68 °F	65 °F	Sun Shine						
61	11/13/11	4:30 PM	694 psig	64 °F	68 °F	65 °F							
62	11/13/11	4:45 PM	694 psig	66 °F	68 °F	65 °F							
63	11/13/11	5:00 PM	693 psig	63 °F	68 °F	65 °F							
64	11/13/11	5:15 PM	693 psig	59 °F	68 °F	65 °F	Cool						
65	11/13/11	5:30 PM	693 psig	57 °F	67 °F	65 °F							
66	11/13/11	5:45 PM	693 psig	58 °F	67 °F	65 °F							
67	11/13/11	6:00 PM	693 psig	56 °F	67 °F	65 °F	Cool						
68	11/13/11	6:15 PM	692 psig	55 °F	66 °F	65 °F							
69	11/13/11	6:30 PM	692 psig	55 °F	66 °F	65 °F							
70	11/13/11	6:45 PM	692 psig	56 °F	66 °F	65 °F							
71	11/13/11	7:00 PM	691 psig	57 °F	66 °F	64 °F							
72	11/13/11	7:15 PM	691 psig	56 °F	66 °F	64 °F							
73	11/13/11	7:30 PM	691 psig	56 °F	66 °F	64 °F	End of Test						
Spike Test									21,145.6 oz.				
Hydrostatic Test								4,569.6 oz.					
Were leaks observed during the test period?			Exposed and buried pipe, no leaks observed.			<table border="1"> <tr> <td>High Test Pressure:</td> <td>746 psig</td> </tr> <tr> <td>Low Test Pressure:</td> <td>691 psig</td> </tr> </table>				High Test Pressure:	746 psig	Low Test Pressure:	691 psig
High Test Pressure:	746 psig												
Low Test Pressure:	691 psig												



Pipe Segment Volume Calculations

Company	Pacific Gas and Electric Company	Job Number	41497367
Construction Co.	ARB	Job Number	0829-53-3500 T-112
Hydro. Test Co.	AKRI	Project No.	T-112 11/13/11
Test Section	PG&E T-112, L-191, MP 9.47- 10.58		
File Name	RCP 61362 - T-112, L-191, MP 9.47 - 10.58		
WATER			

General Pipe Data

Description	Segment					
	1	2	3	4	5	6
Restrained or Unrestrained?	Unrestrained	Unrestrained	Restrained	Restrained	Restrained	Unrestrained
Outside Diameter	24.000 in.	24.000 in.	24.000 in.	24.000 in.	3.500 in.	24.000 in.
Wall Thickness	0.375 in.	0.500 in.	0.313 in.	0.500 in.	0.216 in.	0.375 in.
Inside Diameter	23.250 in.	23.000 in.	23.375 in.	23.000 in.	3.068 in.	23.250 in.
Spec./Grade	API5L-X80	API5L-X60	API5L-X42	API5L-Grade B	API5L-Grade B	API5L-X65
Length Unrestrained	39 ft	28 ft				20 ft
Length Restrained			5,821 ft	71 ft	5 ft	
Temperature -- On Test	61 °F	61 °F	64.0 °F	64.0 °F	64.0 °F	61.0 °F
Temperature -- End of Test	66 °F	66 °F	64.0 °F	64.0 °F	64.0 °F	66.0 °F
Pressure -- On Test	746 psig	746 psig	746 psig	746 psig	746 psig	746 psig
Pressure -- End of Test	891 psig	691 psig	691 psig	691 psig	691 psig	691 psig

Unrestrained Pipe

Vo	1,903.36 gal		Vtp1	1,910.97 gal		Vtp2	1,909.61 gal	
	243,630 oz.			244,604 oz.			244,430 oz.	
Vo Unrestrained	858 gal	604 gal				441 gal		
Fwp 1	1.002284	1.002284				1.002284		
Fpp 1	1.001927	1.001430				1.001927		
Fpt 1	1.000018	1.000018				1.000018		
Fwt 1	1.000080	1.000080				1.000080		
Fpwt 1 = Fpt/Fwt	0.999938	0.999938				0.999938		
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	861.50 gal	606.54 gal				442.93 gal		
Fwp 2	1.002115	1.002115				1.002115		
Fpp 2	1.001785	1.001324				1.001785		
Fpt 2	1.000109	1.000109				1.000109		
Fwt 2	1.000582	1.000582				1.000582		
Fpwt 2 = Fpt/Fwt	0.999527	0.999527				0.999527		
Vtp 2 = Vo(Fwp)(Fpp)(Fpwt)	860.88 gal	606.12 gal				442.61 gal		

Restrained Pipe

Vo	131,293.36 gal		Vtp1	131,773.91 gal		Vtp2	131,735.38 gal	
	16,805,550 oz.			16,867,060 oz.			16,862,129 oz.	
Vo Unrestrained			129,759 gal	1,532 gal	2 gal			
Fwp 1			1.002284	1.002284	1.002284			
Fpp 1			1.001707	1.001055	1.000336			
Fpt 1			1.000048	1.000048	1.000048			
Fwt 1			1.000375	1.000375	1.000375			
Fpwt 1 = Fpt/Fwt			0.999674	0.999674	0.999674			
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)			130,235 gal	1,537 gal	2 gal			
Fwp 2			1.002115	1.002115	1.002115			
Fpp 2			1.001582	1.000979	1.000312			
Fpt 2			1.000048	1.000048	1.000048			
Fwt 2			1.000375	1.000375	1.000375			
Fpwt 2 = Fpt/Fwt			0.999674	0.999674	0.999674			
Vtp 2 = Vo(Fwp)(Fpp)(Fpwt)			130,197 gal	1,537 gal	2 gal			

Combined Pipe

Vo	133,196.72 gal		Vtp1	133,684.87 gal		Vtp2	133,644.99 gal	
	17,049,180 oz.			17,111,664 oz.			17,106,559 oz.	



Pipe Segment Volume Allowance Calculations

Company	Pacific Gas and Electric Company	Job Number	41497367
Construction Co.	ARB	Job Number	0629-53-3500 T-112
Hydro. Test Co.	AKRI	Project No.	T-112 11/13/11
Test Section	PG&E T-112, L-191, MP 9.47- 10.58	WATER	
File Name	RCP 61362 - T-112, L-191, MP 9.47 - 10.58		

General Pipe Data

Description	Segment					
	1	2	3	4	5	6
Restrained or Unrestrained?	Unrestrained	Unrestrained	Restrained	Restrained	Restrained	Unrestrained
Outside Diameter	24.000 in.	24.000 in.	24.000 in.	24.000 in.	3.500 in.	24.000 in.
Wall Thickness	0.375 in.	0.500 in.	0.313 in.	0.500 in.	0.216 in.	0.375 in.
Inside Diameter	23.250 in.	23.000 in.	23.375 in.	23.000 in.	3.068 in.	23.250 in.
Spec./Grade	API5L-X60	API5L-X60	API5L-X42	API5L-Grade B	API5L-Grade B	API5L-X65
Length Unrestrained	39 ft	28 ft				20 ft
Length Restrained			5,821 ft	71 ft	5 ft	
Temperature -- On Test	63 °F	63 °F	63 °F	63 °F	63 °F	63 °F
Temperature -- End of Test	64 °F	64 °F	64 °F	64 °F	64 °F	64 °F
Pressure -- On Test	718 psig	718 psig	718 psig	718 psig	718 psig	718 psig
Pressure -- End of Test	718 psig	718 psig	718 psig	718 psig	718 psig	718 psig

Unrestrained Pipe

Vo	1,903.36 gal 243,630 oz.		Vtp1	1,910.39 gal 244,530 oz.		Vtp2	1,910.22 gal 244,508 oz.
Vo Unrestrained	858 gal	604 gal				441 gal	
Fwp 1	1.002198	1.002198				1.002198	
Fpp 1	1.001855	1.001376				1.001855	
Fpt 1	1.000055	1.000055				1.000055	
Fwt 1	1.000267	1.000267				1.000267	
Fpwt 1 = Fpt/Fwt	0.999788	0.999788				0.999788	
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	861.23 gal	606.36 gal				442.79 gal	
Fwp 2	1.002198	1.002198				1.002198	
Fpp 2	1.001855	1.001376				1.001855	
Fpt 2	1.000073	1.000073				1.000073	
Fwt 2	1.000375	1.000375				1.000375	
Fpwt 2 = Fpt/Fwt	0.999698	0.999698				0.999698	
Vtp 2 = Vo(Fwp)(Fpp)(Fpwt)	861.16 gal	606.31 gal				442.75 gal	

Restrained Pipe

Vo	131,293.36 gal 16,805,550 oz.		Vtp1	131,766.36 gal 16,866,097 oz.		Vtp2	131,754.29 gal 16,864,549 oz.
Vo Restrained			129,759 gal	1,532 gal	2 gal		
Fwp 1			1.002198	1.002198	1.002198		
Fpp 1			1.001640	1.001013	1.000320		
Fpt 1			1.000036	1.000036	1.000036		
Fwt 1			1.000267	1.000267	1.000267		
Fpwt 1 = Fpt/Fwt			0.999769	0.999769	0.999769		
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)			130,227 gal	1,537 gal	2 gal		
Fwp 2			1.002198	1.002198	1.002198		
Fpp 2			1.001643	1.001016	1.000324		
Fpt 2			1.000048	1.000048	1.000048		
Fwt 2			1.000375	1.000375	1.000375		
Fpwt 2 = Fpt/Fwt			0.999674	0.999674	0.999674		
Vtp 2 = Vo(Fwp)(Fpp)(Fpwt)			130,216 gal	1,537 gal	2 gal		

Combined Pipe

Vo	133,196.72 gal 17,049,180 oz.		Vtp1	133,676.77 gal 17,110,627 oz.		Vtp2	133,664.51 gal 17,109,057 oz.
1 °F Change	12.26 gal		1,569.59 oz.				

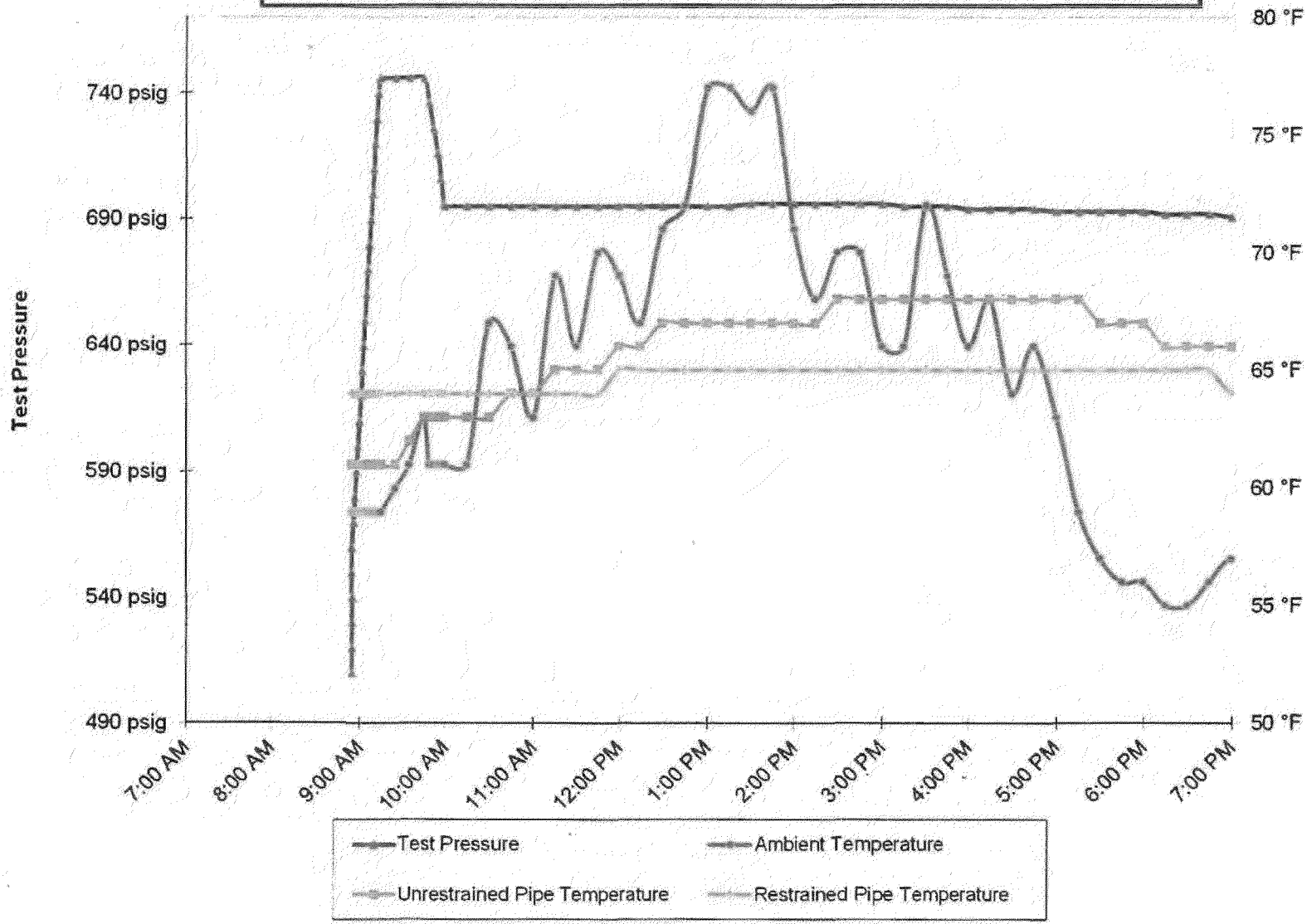
RCP			Hydrostatic Test Pipe Data Table						
Pipe Type	Length	Restrained / Unrestrained	Outside Diameter	Wall Thickness	Specification & Grade	Pipe Yield Pressure	Material	Joint Type	Seam Type
1	38.90 ft	Unrestrained	24.000 in.	0.3750 in.	API5L-X60	1,875 psig	Steel	Arc Weld	DSAW
2	28.00 ft	Unrestrained	24.000 in.	0.5000 in.	API5L-X60	2,500 psig	Steel	Arc Weld	DSAW
3	5,820.70 ft	Restrained	24.000 in.	0.3125 in.	API5L-X42	1,094 psig	Steel	Arc Weld	DSAW
4	71.00 ft	Restrained	24.000 in.	0.5000 in.	API5L-Grade B	1,458 psig	Steel	Arc Weld	DSAW
5	5.00 ft	Restrained	3.500 in.	0.2160 in.	API5L-Grade B	4,320 psig	Steel	Arc Weld	SM
6	20.00 ft	Unrestrained	24.000 in.	0.3750 in.	API5L-X65	2,031 psig	Steel	Arc Weld	DSAW

Hydrostatic Test Project Owner & Participants		
Owner Company	Pacific Gas and Electric Company	
Address	350 N. Wiget Walnut Creek, CA 94598 Attention: [Redacted]	
Job Number	41497367	
Construction Company	ARB	
Address	1875 Lovelidge Road Pittsburg, CA 94565 Attention: [Redacted]	
Job Number	0629-53-3500 T-112	
Hydrostatic Test Co.	AKRI	
Address	1414 Valhalla Drive Bakersfield, CA 93309	
Project No.	T-112 11/13/11	
Test Section	PG&E T-112, L-191, MP 9.47- 10.58 From: 58+97.15 To: 0+05.3	
File Name	RCP 61362 - T-112, L-191, MP 9.47 - 10.58	

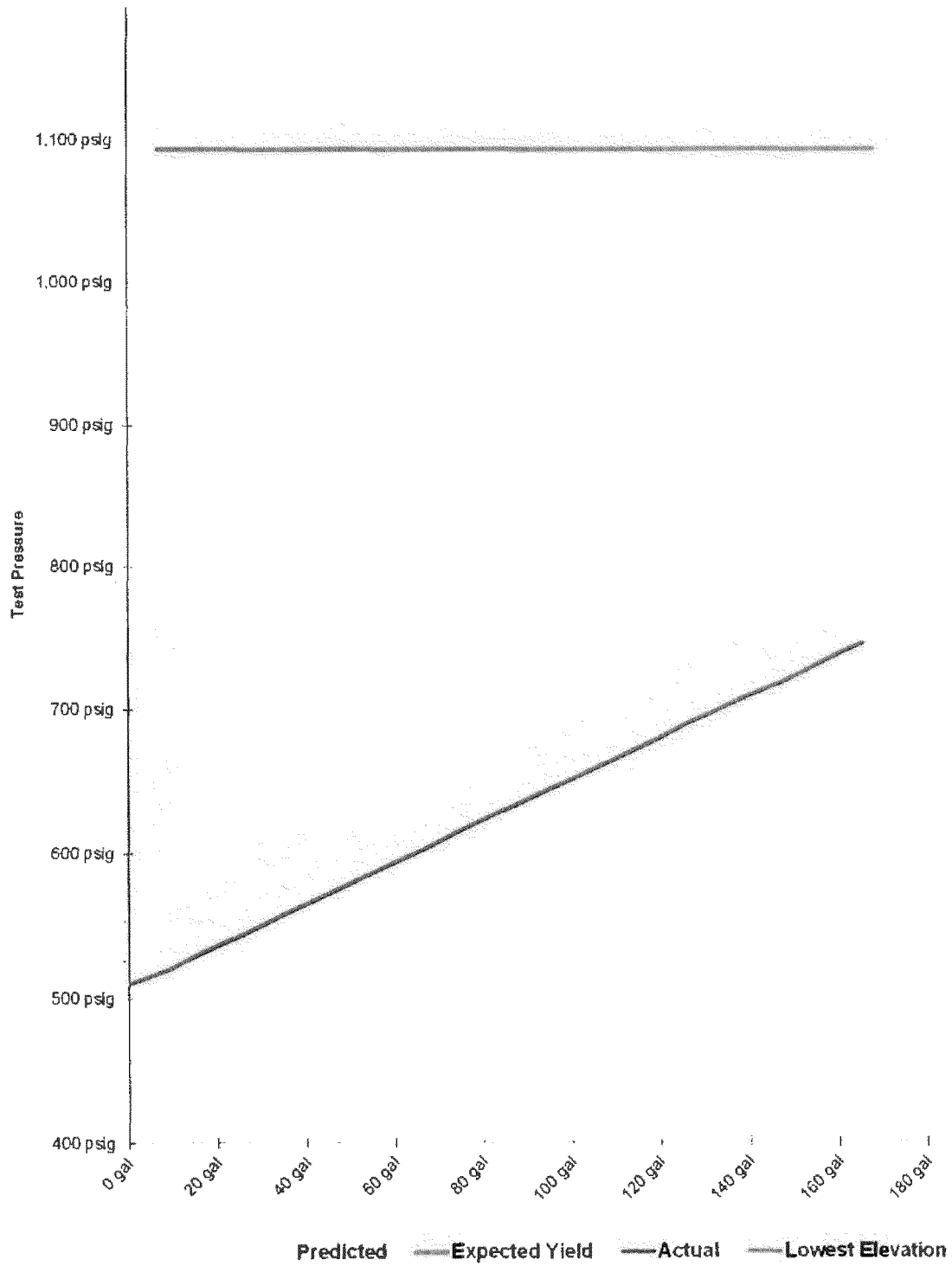
Part II – Test Data (TO BE PREPARED BY PERSON SUPERVISING TEST AT TIME OF TEST)				Note: Minimum test pressure and duration are not to be changed without written approval.			
Time and Date Test Pressure Reached	11/13/11 9:15 AM	Elevation at Test Point	1 ft	Min. Required Test Press At Test Point (1)	679.90 psig	Max. Allowable Test Press at Test Point (4)	749.57 psig
Time and Date Test Ended	11/13/11 7:30 PM	Max. Elevation in Test Section	40 ft	Min. Indicated Test Pressure (2)	691.00 psig	Max. Indicated Test Pressure (5)	746.00 psig
Actual Duration of Test	10 hours 15 minutes	Min. Elevation in Test Section	0 ft	Min. Test Pressure at Max. Elevation (3)	674.10 psig	Max. Test Pressure at Min. Elevation (6)	746.43 psig

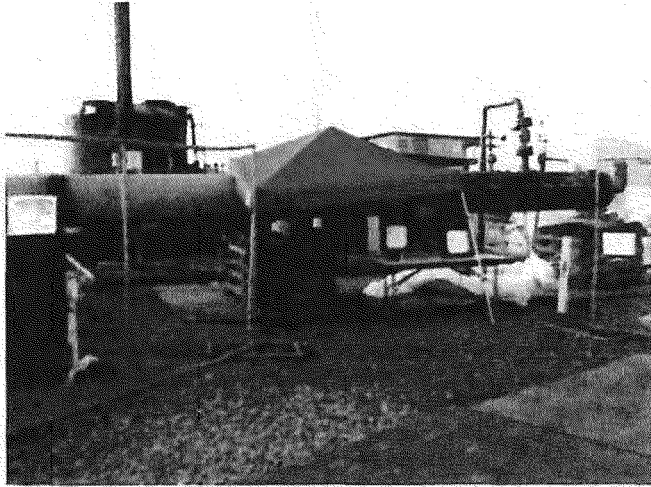


PG&E T-112, L-191, MP 9.47- 10.58

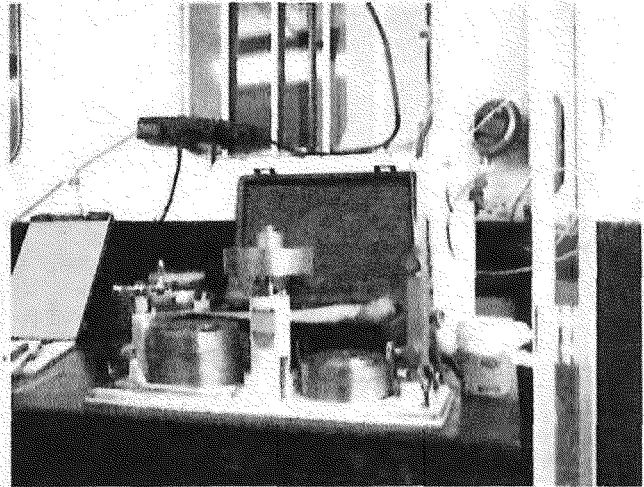


**Spike Pressure Test
Stress Strain Curve -- PG&E T-112 , L-191, MP 9.47- 10.58**





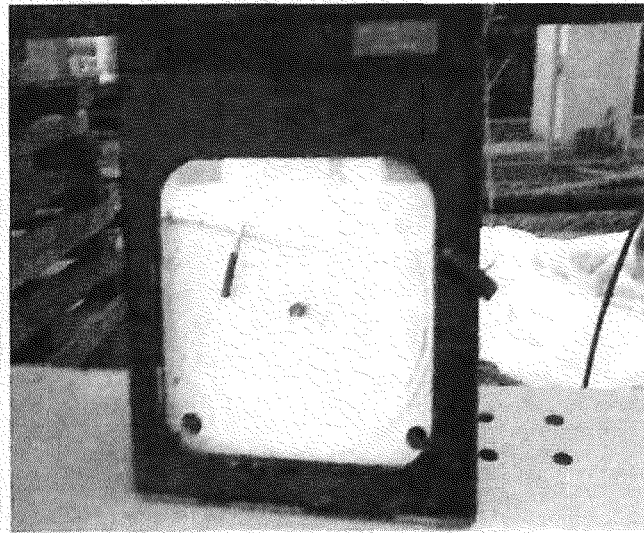
Test Header at Location A



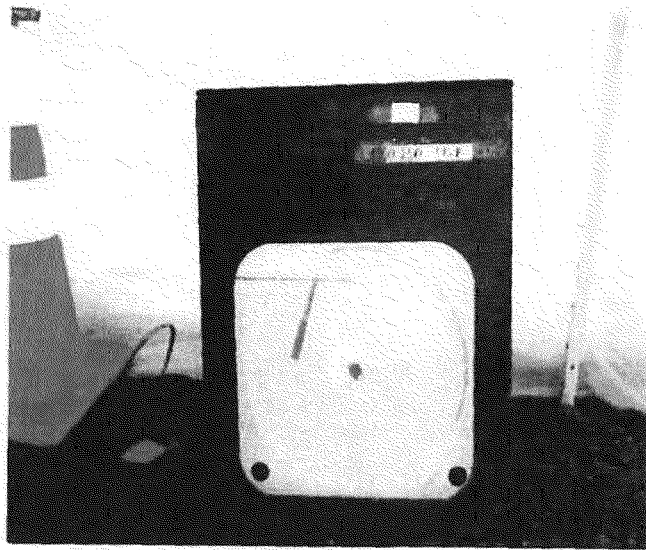
Deadweight Testing Equipment



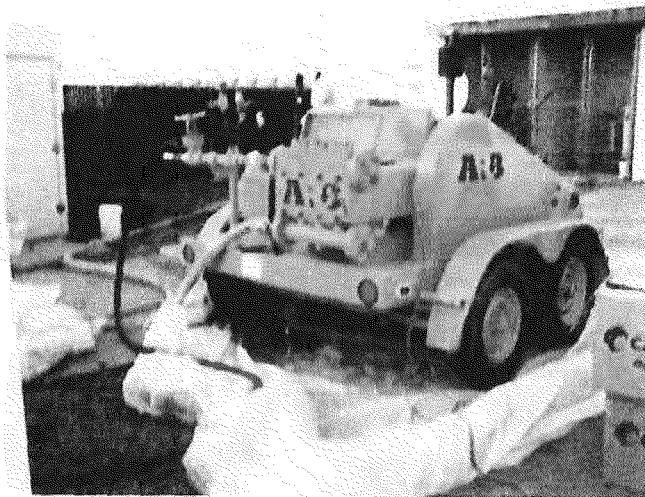
Pressure Recorder and Chart



Unrestrained Temp Recorder and Chart



Restrained Temp Recorder and Chart



Pressure Pump