



RCP, Inc

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

Redacted

August 2, 2011

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

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Test Contractor:	Milbar Hydro-test Incorporated – FY12-112
Asset Owner:	Pacific Gas and Electric Company – 41497310
Construction Contractor:	Snelson – 41474005-T72
Test Section:	PG&E T-72 Line 300A, MP 493.59 - 496.05
Test Date:	August 1, 2011
Certificate Number:	RCP 61362 - T-72, L-300A

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 Milbar Hydro-test Incorporated 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 1115 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 8.83 hour test duration period.

This hydrostatic test was completed successfully. Pressure was maintained on the test facilities in excess of 8.83 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 1028 psig and the established MAOP is 685 psig.

Pressure decreased 87 psi during the test. 31,129.60 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 8,594.97 ounces, gain, which is equivalent to a 0.84 °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 gain is attributed to the error characteristic of the temperature measurement instrumentation utilized.

Sincerely,

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Hydrostatic Test Plan T-72.xlsm
Letter



Hydrostatic Test Certification

Company	Pacific Gas and Electric Company	Job Number	41497310
Construction Co.	Snelson	Job Number	41474005-T72
Hydro. Test Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-72 Line 300A, MP 493.59 - 496.05		
File Name	RCP 61362 - T-72, L-300A		

Hydrostatic Test Pressure

APPLICABLE CODE FOR CERTIFICATION:

Test Date:

1-Aug-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-72 Line 300A, MP 493.59 - 496.05

From: 0+00

To: 129+37

Pipe Data

Segment	Length	Diameter	Wall Thickness	Specification	100% SMYS
1	52 ft	34.000 in.	0.505 in.	API5L-X60, DSAW, Arc Weld, Steel	1,782 psi
2	15 ft	34.000 in.	0.375 in.	API5L-X65, DSAW, Arc Weld, Steel	1,434 psi
3	11,759 ft	34.000 in.	0.500 in.	API5L-X46, DSAW, Arc Weld, Steel	1,353 psi
4	983 ft	34.000 in.	0.380 in.	API5L-X60, DSAW, Arc Weld, Steel	1,341 psi
5	212 ft	34.000 in.	0.505 in.	API5L-X60, DSAW, Arc Weld, Steel	1,782 psi
6	40 ft	34.000 in.	0.500 in.	API5L-X65, DSAW, Arc Weld, Steel	1,912 psi
7	2 ft	34.000 in.	0.375 in.	API5L-X60, DSAW, Arc Weld, Steel	1,324 psi
8	20 ft	12.750 in.	0.375 in.	API5L-Grade B, SM, Arc Weld, Steel	2,059 psi

Initial Test Conditions

Pressure at Test Point:	1,115 psig	Date/Time:	8/1/11 5:25 PM	Pipe Temperature	
Ambient Temperature:	78.0 °F	Elevation @ Test Point:	126.0 ft	Unrestrained:	79.0 °F
Pressure @ High Point (Cal/Measure):	1,115 psig	Elevation @ High Point:	126.0 ft	Restrained:	77.0 °F
Pressure @ Low Point (Cal/Measure):	1,127 psig	Elevation @ Low Point:	99.0 ft	Location:	0+00
				Location:	0+00
				Location:	69+10

Final Test Conditions

Pressure at Test Point:	1,028 psig	Date/Time:	8/2/11 2:15 AM	Pipe Temperature	
Ambient Temperature:	60.0 °F	Elevation @ Test Point:	126.0 ft	Unrestrained:	71.0 °F
Pressure @ High Point (Cal/Measure):	1,028 psig	Elevation @ High Point:	126.0 ft	Restrained:	76.0 °F
Pressure @ Low Point (Cal/Measure):	1,040 psig	Elevation @ Low Point:	99.0 ft	Location:	0+00
				Location:	0+00
				Location:	69+10
Total Fluid Injected:				Volume gain	
Total Fluid Withdrawn:	31129.60 fluid ounces				
Net Change in Volume of the Test Section ± (+ Gain, - Loss):	8,594.97 oz	gain		0.0115%	0.842 °F equivalent

Test Duration: 8.83 hours

Minimum Test Pressure:	1,028 psig	1,028 psig	1,040 psig
Maximum Test Pressure:	1,115 psig	1,115 psig	1,127 psig
% SMYS :	84.2%	84.2%	85.1%

Minimum Test Pressure (Calculated/Measured):

1,028 psig

Maximum Allowable Operating Pressure:

DOT Part 192

Test Factor= 1.50

685 psig

Were leaks observed?

No

Explain:

Acceptable Hydrostatic Test?

Yes

The test segment was subjected to a spike pressure test of 1115 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 8.83 hour test duration period.

No leaks were observed during the test period. The test section included 12,954 feet of buried and 129 feet of exposed pipe. Pressure lost 87 psi during the test. The buried pipe segment lost 1°F fluid temperature and the exposed pipe segment lost 8°F.

31,129.60 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 8,594.97 ounces, gain, which is equivalent to a 0.84 °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 gain is attributed to the error characteristic of the temperature measurement instrumentation utilized.

Remarks

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2-Aug-11

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Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41497310
Construction Co.	Snelson	Job Number	41474005-T72
Testing Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-72 Line 300A, MP 493.59 - 496.05		
File Name	RCP 61362 - T-72, L-300A		

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Date	1-Aug-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	8/1/11	4:50 PM	760 psig	77 °F	79 °F	77 °F	Start Spike		
2	8/1/11	4:51 PM	770 psig	77 °F	79 °F	77 °F	Inject		3,777 oz.
3	8/1/11	4:52 PM	780 psig	77 °F	79 °F	77 °F	Inject		4,114 oz.
4	8/1/11	4:53 PM	790 psig	77 °F	79 °F	77 °F	Inject		3,710 oz.
5	8/1/11	4:54 PM	800 psig	77 °F	79 °F	77 °F	Inject		4,114 oz.
6	8/1/11	4:55 PM	810 psig	77 °F	79 °F	77 °F	Inject		3,777 oz.
7	8/1/11	4:56 PM	820 psig	77 °F	79 °F	77 °F	Inject		3,980 oz.
8	8/1/11	4:57 PM	830 psig	77 °F	79 °F	77 °F	Inject		3,777 oz.
9	8/1/11	4:58 PM	840 psig	77 °F	79 °F	77 °F	Inject		3,912 oz.
10	8/1/11	4:59 PM	850 psig	77 °F	79 °F	77 °F	Inject		3,912 oz.
11	8/1/11	5:00 PM	860 psig	77 °F	79 °F	77 °F	Inject		3,845 oz.
12	8/1/11	5:01 PM	870 psig	77 °F	79 °F	77 °F	Inject		3,980 oz.
13	8/1/11	5:02 PM	880 psig	77 °F	79 °F	77 °F	Inject		3,777 oz.
14	8/1/11	5:03 PM	890 psig	77 °F	79 °F	77 °F	Inject		3,845 oz.
15	8/1/11	5:04 PM	900 psig	77 °F	79 °F	77 °F	Inject		3,845 oz.
16	8/1/11	5:05 PM	910 psig	77 °F	79 °F	77 °F	Inject		3,912 oz.
17	8/1/11	5:06 PM	920 psig	77 °F	79 °F	77 °F	Inject		3,912 oz.
18	8/1/11	5:07 PM	930 psig	77 °F	79 °F	77 °F	Inject		3,845 oz.
19	8/1/11	5:08 PM	940 psig	77 °F	79 °F	77 °F	Inject		3,845 oz.
20	8/1/11	5:09 PM	950 psig	77 °F	79 °F	77 °F	Inject		4,047 oz.
21	8/1/11	5:10 PM	960 psig	77 °F	79 °F	77 °F	Inject		3,912 oz.
22	8/1/11	5:11 PM	970 psig	77 °F	79 °F	77 °F	Inject		3,845 oz.
23	8/1/11	5:12 PM	980 psig	77 °F	79 °F	77 °F	Inject		3,845 oz.
24	8/1/11	5:13 PM	990 psig	77 °F	79 °F	77 °F	Inject		3,980 oz.
25	8/1/11	5:14 PM	1,000 psig	77 °F	79 °F	77 °F	Inject		3,845 oz.
26	8/1/11	5:15 PM	1,010 psig	77 °F	79 °F	77 °F	Inject		3,912 oz.
27	8/1/11	5:16 PM	1,020 psig	77 °F	79 °F	77 °F	Inject		3,845 oz.
28	8/1/11	5:17 PM	1,030 psig	77 °F	79 °F	77 °F	Inject		3,912 oz.
29	8/1/11	5:18 PM	1,040 psig	77 °F	79 °F	77 °F	Inject		3,845 oz.
30	8/1/11	5:19 PM	1,050 psig	77 °F	79 °F	77 °F	Inject		3,912 oz.
31	8/1/11	5:20 PM	1,060 psig	77 °F	79 °F	77 °F	Inject		3,912 oz.
32	8/1/11	5:21 PM	1,070 psig	77 °F	79 °F	77 °F	Inject		3,845 oz.
33	8/1/11	5:22 PM	1,080 psig	77 °F	79 °F	77 °F	Inject		3,912 oz.
34	8/1/11	5:23 PM	1,090 psig	77 °F	79 °F	77 °F	Inject		3,777 oz.
35	8/1/11	5:24 PM	1,100 psig	77 °F	79 °F	77 °F	Inject		3,912 oz.
36	8/1/11	5:25 PM	1,110 psig	77 °F	79 °F	77 °F	Inject		3,980 oz.
37	8/1/11	5:25 PM	1,115 psig	77 °F	79 °F	77 °F	Inject		2,024 oz.
38	8/1/11	5:25 PM	1,115 psig	78 °F	79 °F	77 °F	On Test		
39	8/1/11	5:35 PM	1,115 psig	76 °F	78 °F	77 °F			
40	8/1/11	5:45 PM	1,115 psig	77 °F	78 °F	77 °F			
41	8/1/11	5:55 PM	1,115 psig	77 °F	77 °F	77 °F	End Spike		
42	8/1/11	5:56 PM	1,105 psig	77 °F	77 °F	77 °F	Bleed	3,891 oz.	
43	8/1/11	5:57 PM	1,095 psig	77 °F	77 °F	77 °F		3,891 oz.	



Dead Weight Log Sheet

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Owner Company	Pacific Gas and Electric Company	Job Number	41497310
Construction Co.	Snelson	Job Number	41474005-T72
Testing Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-72 Line 300A, MP 493.59 - 496.05		
File Name	RCP 61362 - T-72, L-300A		

Date	1-Aug-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	8/1/11	5:58 PM	1,085 psig	77 °F	77 °F	77 °F		3,891 oz.	
45	8/1/11	5:59 PM	1,075 psig	77 °F	77 °F	77 °F		3,891 oz.	
46	8/1/11	6:00 PM	1,065 psig	77 °F	77 °F	77 °F		3,891 oz.	
47	8/1/11	6:15 PM	1,035 psig	76 °F	77 °F	77 °F		11,674 oz.	
48	8/1/11	6:25 PM	1,031 psig	76 °F	77 °F	77 °F			
49	8/1/11	6:30 PM	1,031 psig	76 °F	77 °F	77 °F			
50	8/1/11	6:45 PM	1,031 psig	75 °F	78 °F	77 °F			
51	8/1/11	7:00 PM	1,031 psig	74 °F	78 °F	76 °F			
52	8/1/11	7:15 PM	1,031 psig	73 °F	77 °F	77 °F			
53	8/1/11	7:30 PM	1,031 psig	72 °F	77 °F	77 °F			
54	8/1/11	7:45 PM	1,031 psig	70 °F	77 °F	77 °F			
55	8/1/11	8:00 PM	1,031 psig	69 °F	76 °F	77 °F			
56	8/1/11	8:15 PM	1,031 psig	69 °F	76 °F	77 °F			
57	8/1/11	8:30 PM	1,030 psig	68 °F	75 °F	77 °F			
58	8/1/11	8:45 PM	1,030 psig	68 °F	75 °F	77 °F			
59	8/1/11	9:00 PM	1,030 psig	67 °F	74 °F	77 °F			
60	8/1/11	9:15 PM	1,030 psig	67 °F	74 °F	77 °F			
61	8/1/11	9:30 PM	1,030 psig	66 °F	74 °F	77 °F			
62	8/1/11	9:45 PM	1,030 psig	66 °F	74 °F	77 °F			
63	8/1/11	10:00 PM	1,029 psig	65 °F	73 °F	77 °F			
64	8/1/11	10:15 PM	1,029 psig	65 °F	73 °F	77 °F			
65	8/1/11	10:30 PM	1,029 psig	65 °F	73 °F	77 °F			
66	8/1/11	10:45 PM	1,029 psig	64 °F	73 °F	77 °F			
67	8/1/11	11:00 PM	1,029 psig	64 °F	73 °F	77 °F			
68	8/1/11	11:15 PM	1,029 psig	63 °F	73 °F	76 °F			
69	8/1/11	11:30 PM	1,029 psig	63 °F	72 °F	77 °F			
70	8/1/11	11:45 PM	1,029 psig	63 °F	72 °F	76 °F			
71	8/2/11	12:00 AM	1,029 psig	62 °F	72 °F	77 °F			
72	8/2/11	12:15 AM	1,029 psig	62 °F	72 °F	76 °F			
73	8/2/11	12:30 AM	1,029 psig	62 °F	72 °F	76 °F			
74	8/2/11	12:45 AM	1,028 psig	62 °F	71 °F	76 °F			
75	8/2/11	1:00 AM	1,028 psig	61 °F	71 °F	76 °F			
76	8/2/11	1:15 AM	1,028 psig	61 °F	71 °F	76 °F			
77	8/2/11	1:30 AM	1,028 psig	60 °F	71 °F	76 °F			
78	8/2/11	1:45 AM	1,028 psig	60 °F	71 °F	76 °F			
79	8/2/11	2:00 AM	1,028 psig	60 °F	71 °F	76 °F			
80	8/2/11	2:15 AM	1,028 psig	60 °F	71 °F	76 °F	End of Test		
							Spike Test		138,137.6 oz.
							Hydrostatic Test	31,129.6 oz.	

Were leaks observed during the test period?	Exposed and buried pipe, no leaks observed.	High Test Pressure: 1,115 psig	Low Test Pressure: 1,028 psig
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Pipe Segment Volume Calculations

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Company	Pacific Gas and Electric Company	Job Number	41497310
Construction Co.	Snelson	Job Number	41474005-T72
Hydro. Test Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-72 Line 300A, MP 493.59 - 496.05		
File Name	RCP 61362 - T-72, L-300A		WATER

General Pipe Data

Description	Segment							
	1	2	3	4	5	6	7	8
Restrained or Unrestrained?	Unrestrained	Unrestrained	Restrained	Restrained	Restrained	Unrestrained	Unrestrained	Unrestrained
Outside Diameter	34.000 in.	34.000 in.	34.000 in.	34.000 in.	34.000 in.	34.000 in.	34.000 in.	12.750 in.
Wall Thickness	0.505 in.	0.375 in.	0.500 in.	0.380 in.	0.505 in.	0.500 in.	0.375 in.	0.375 in.
Inside Diameter	32.990 in.	33.250 in.	33.000 in.	33.240 in.	32.990 in.	33.000 in.	33.250 in.	12.000 in.
Spec./Grade	API5L-X60	API5L-X65	API5L-X46	API5L-X60	API5L-X60	API5L-X65	API5L-X60	API5L-Grade B
Length Unrestrained	52 ft	15 ft				40 ft	2 ft	20 ft
Length Restrained			11,759 ft	983 ft	212 ft			
Temperature -- On Test	79 °F	79 °F	77.0 °F	77.0 °F	77.0 °F	79.0 °F	79.0 °F	79.0 °F
Temperature -- End of Test	71 °F	71 °F	76.0 °F	76.0 °F	76.0 °F	71.0 °F	71.0 °F	71.0 °F
Pressure -- On Test	1,115 psig	1,115 psig	1,115 psig	1,115 psig	1,115 psig	1,115 psig	1,115 psig	1,115 psig
Pressure -- End of Test	1,028 psig	1,028 psig	1,028 psig	1,028 psig	1,028 psig	1,028 psig	1,028 psig	1,028 psig

Unrestrained Pipe

Sum:	Vo	4,970.58 gal		Vtp1	4,993.88 gal		Vtp2	4,996.00 gal	
		636,234 oz.			639,217 oz.			639,488 oz.	
Vo Unrestrained	2,309 gal	677 gal			1,777 gal	90 gal	118 gal		
Fwp 1	1.003418	1.003418			1.003418	1.003418	1.003418		
Fpp 1	1.003035	1.004119			1.003066	1.004119	1.001487		
Fpt 1	1.000346	1.000346			1.000346	1.000346	1.000346		
Fwt 1	1.002255	1.002255			1.002255	1.002255	1.002255		
Fpwt 1 = Fpt/Fwt	0.998095	0.998095			0.998095	0.998095	0.998095		
Vip 1 = Vo(Fwp)(Fpp)(Fpwt)	2,319.51 gal	680.41 gal			1,785.38 gal	90.72 gal	117.86 gal		
Fwp 2	1.003150	1.003150			1.003150	1.003150	1.003150		
Fpp 2	1.002798	1.003798			1.002827	1.003798	1.001371		
Fpt 2	1.000200	1.000200			1.000200	1.000200	1.000200		
Fwt 2	1.001170	1.001170			1.001170	1.001170	1.001170		
Fpwt = Fpt/Fwt	0.999032	0.999032			0.999032	0.999032	0.999032		
Vip = Vo(Fwp)(Fpp)(Fpwt)	2,320.52 gal	680.65 gal			1,786.15 gal	90.75 gal	117.92 gal		

Restrained Pipe

Sum:	Vo	576,192.31 gal		Vtp1	578,501.80 gal		Vtp2	578,323.63 gal	
		73,752,615 oz.			74,048,231 oz.			74,025,425 oz.	
Vo Unrestrained		522,465 gal		44,313 gal	9,414 gal				
Fwp 1		1.003418		1.003418	1.003418				
Fpp 1		1.002293		1.003020	1.002271				
Fpt 1		1.000206		1.000206	1.000206				
Fwt 1		1.001966		1.001966	1.001966				
Fpwt 1 = Fpt/Fwt		0.998243		0.998243	0.998243				
Vip 1 = Vo(Fwp)(Fpp)(Fpwt)		524,530 gal		44,521 gal	9,451 gal				
Fwp 2		1.003150		1.003150	1.003150				
Fpp 2		1.002116		1.002785	1.002095				
Fpt 2		1.000194		1.000194	1.000194				
Fwt 2		1.001813		1.001813	1.001813				
Fpwt = Fpt/Fwt		0.998384		0.998384	0.998384				
Vip = Vo(Fwp)(Fpp)(Fpwt)		524,371 gal		44,505 gal	9,448 gal				

Combined Pipe

Sum:	Vo	581,162.89 gal		Vtp1	583,495.69 gal		Vtp2	583,319.63 gal	
		74,388,849 oz.			74,687,448 oz.			74,664,913 oz.	



Pipe Segment Volume Allowance Calculations

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Company	Pacific Gas and Electric Company	Job Number	41497310
Construction Co.	Snelson	Job Number	41474005-T72
Hydro. Test Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-72 Line 300A, MP 493.59 - 496.05		
File Name	RCP 61362 - T-72, L-300A		WATER

General Pipe Data

Description	Segment							
	1	2	3	4	5	6	7	8
Restrained or Unrestrained?	Unrestrained	Unrestrained	Restrained	Restrained	Restrained	Unrestrained	Unrestrained	Unrestrained
Outside Diameter	34.000 in.	34.000 in.	34.000 in.	34.000 in.	34.000 in.	34.000 in.	34.000 in.	12.750 in.
Wall Thickness	0.505 in.	0.375 in.	0.500 in.	0.380 in.	0.505 in.	0.500 in.	0.375 in.	0.375 in.
Inside Diameter	32.990 in.	33.250 in.	33.000 in.	33.240 in.	32.990 in.	33.000 in.	33.250 in.	12.000 in.
Spec./Grade	API5L-X60	API5L-X65	API5L-X46	API5L-X60	API5L-X60	API5L-X65	API5L-X60	API5L-Grade B
Length Unstrained	52.00 ft	15.00 ft				40 ft	2 ft	20 ft
Length Restrained			11,759 ft	983 ft	212 ft			
Temperature -- On Test	74 °F	74 °F	76 °F	76 °F	76 °F	74 °F	74 °F	74 °F
Temperature -- End of Test	75 °F	75 °F	77 °F	77 °F	77 °F	75 °F	75 °F	75 °F
Pressure -- On Test	1,071 psig	1,071 psig	1,071 psig	1,071 psig	1,071 psig	1,071 psig	1,071 psig	1,071 psig
Pressure -- End of Test	1,071 psig	1,071 psig	1,071 psig	1,071 psig	1,071 psig	1,071 psig	1,071 psig	1,071 psig

Unrestrained Pipe

Sum:	Vo	4,970.58 gal 636,234 oz.	Vtp1	4,995.69 gal 639,448 oz.	Vtp2	4,995.05 gal 639,366 oz.
Vo Unrestrained	2,309 gal	677 gal			1,777 gal	90 gal
Fwp 1	1.003283	1.003283			1.003283	1.003283
Fpp 1	1.002915	1.003957			1.002945	1.003957
Fpt 1	1.000255	1.000255			1.000255	1.000255
Fwt 1	1.001542	1.001542			1.001542	1.001542
Fpwt 1 = Fpt/Fwt	0.998715	0.998715			0.998715	0.998715
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	2,320.36 gal	680.63 gal			1,786.03 gal	90.75 gal
Fwp 2	1.003283	1.003283			1.003283	1.003283
Fpp 2	1.002915	1.003957			1.002945	1.003957
Fpt 2	1.000273	1.000273			1.000273	1.000273
Fwt 2	1.001688	1.001688			1.001688	1.001688
Fpwt = Fpt/Fwt	0.998587	0.998587			0.998587	0.998587
Vtp = Vo(Fwp)(Fpp)(Fpwt)	2,320.07 gal	680.55 gal			1,785.80 gal	90.74 gal

Restrained Pipe

Sum:	Vo	576,192.31 gal 73,752,615 oz.	Vtp1	578,450.77 gal 74,041,699 oz.	Vtp2	578,371.69 gal 74,031,576 oz.
Vo Restrained		522,465 gal	44,313 gal	9,414 gal		
Fwp 1		1.003283	1.003283	1.003283		
Fpp 1		1.002202	1.002899	1.002180		
Fpt 1		1.000194	1.000194	1.000194		
Fwt 1		1.001813	1.001813	1.001813		
Fpwt 1 = Fpt/Fwt		0.998384	0.998384	0.998384		
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		524,485 gal	44,516 gal	9,450 gal		
Fwp 2		1.003283	1.003283	1.003283		
Fpp 2		1.002205	1.002903	1.002183		
Fpt 2		1.000206	1.000206	1.000206		
Fwt 2		1.001966	1.001966	1.001966		
Fpwt = Fpt/Fwt		0.998243	0.998243	0.998243		
Vtp = Vo(Fwp)(Fpp)(Fpwt)		524,414 gal	44,510 gal	9,449 gal		

Combined Pipe

Sum:	Vo	581,162.89 gal 74,388,849 oz.	Vtp1	583,446.46 gal 74,681,147 oz.	Vtp2	583,366.74 gal 74,670,942 oz.
1 °F Change	79.72 gal		10,204.24 oz.			



Hydrostatic Test Pipe Data Table

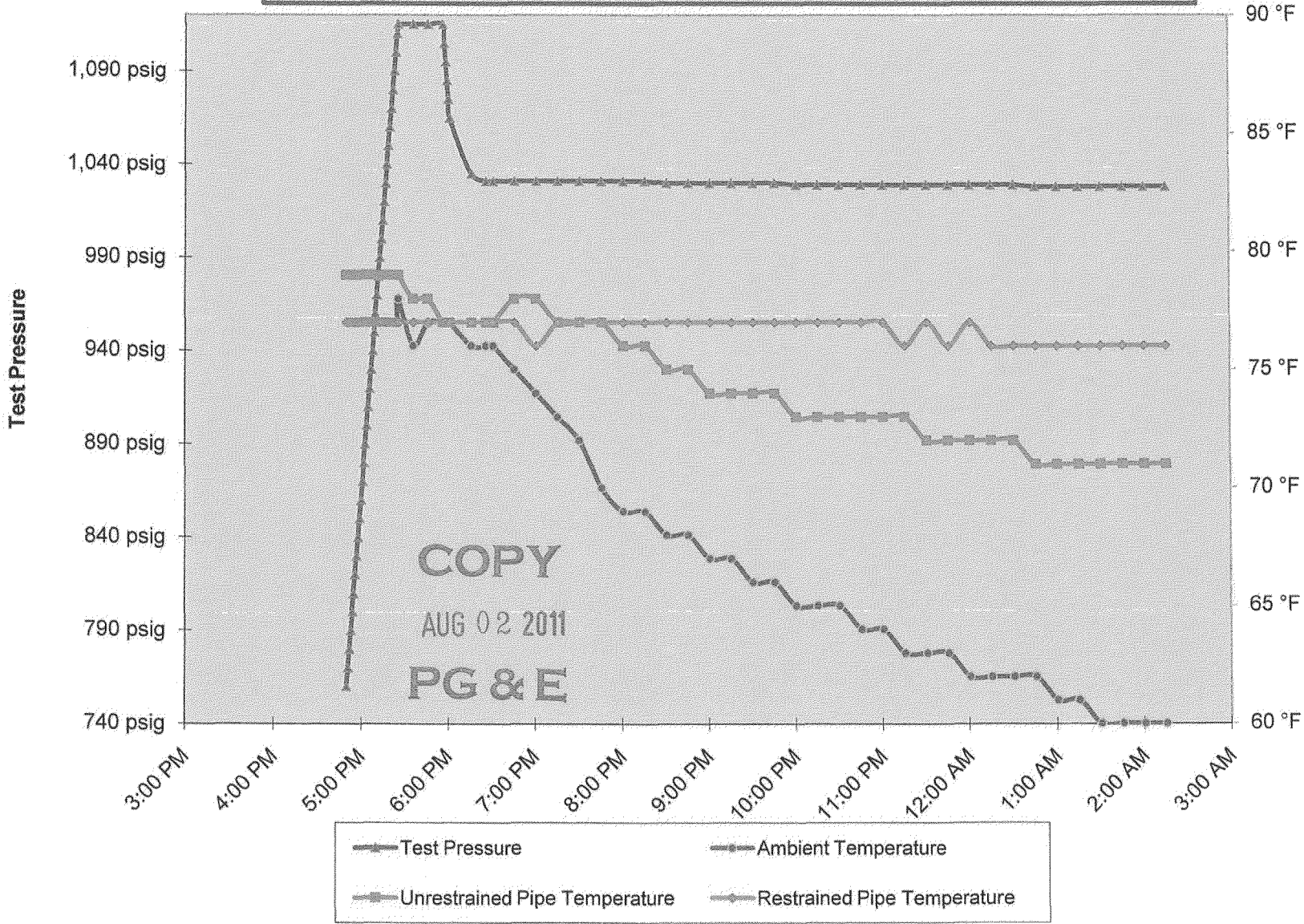
Pipe Type	Length	Restrained / Unrestrained	Outside Diameter	Wall Thickness	Specification & Grade	Pipe Yield Pressure	Material	Joint Type	Seam Type
1	52 ft	Unrestrained	34.000 in.	0.5050 in.	API5L-X60	1,782 psig	Steel	Arc Weld	DSAW
2	15 ft	Unrestrained	34.000 in.	0.3750 in.	API5L-X65	1,434 psig	Steel	Arc Weld	DSAW
3	11,759 ft	Restrained	34.000 in.	0.5000 in.	API5L-X46	1,353 psig	Steel	Arc Weld	DSAW
4	983 ft	Restrained	34.000 in.	0.3800 in.	API5L-X60	1,341 psig	Steel	Arc Weld	DSAW
5	212 ft	Restrained	34.000 in.	0.5050 in.	API5L-X60	1,782 psig	Steel	Arc Weld	DSAW
6	40 ft	Unrestrained	34.000 in.	0.5000 in.	API5L-X65	1,912 psig	Steel	Arc Weld	DSAW
7	2 ft	Unrestrained	34.000 in.	0.3750 in.	API5L-X60	1,324 psig	Steel	Arc Weld	DSAW
8	20 ft	Unrestrained	12.750 in.	0.3750 in.	API5L-Grade B	2,059 psig	Steel	Arc Weld	SM

Hydrostatic Test Project Owner & Participants

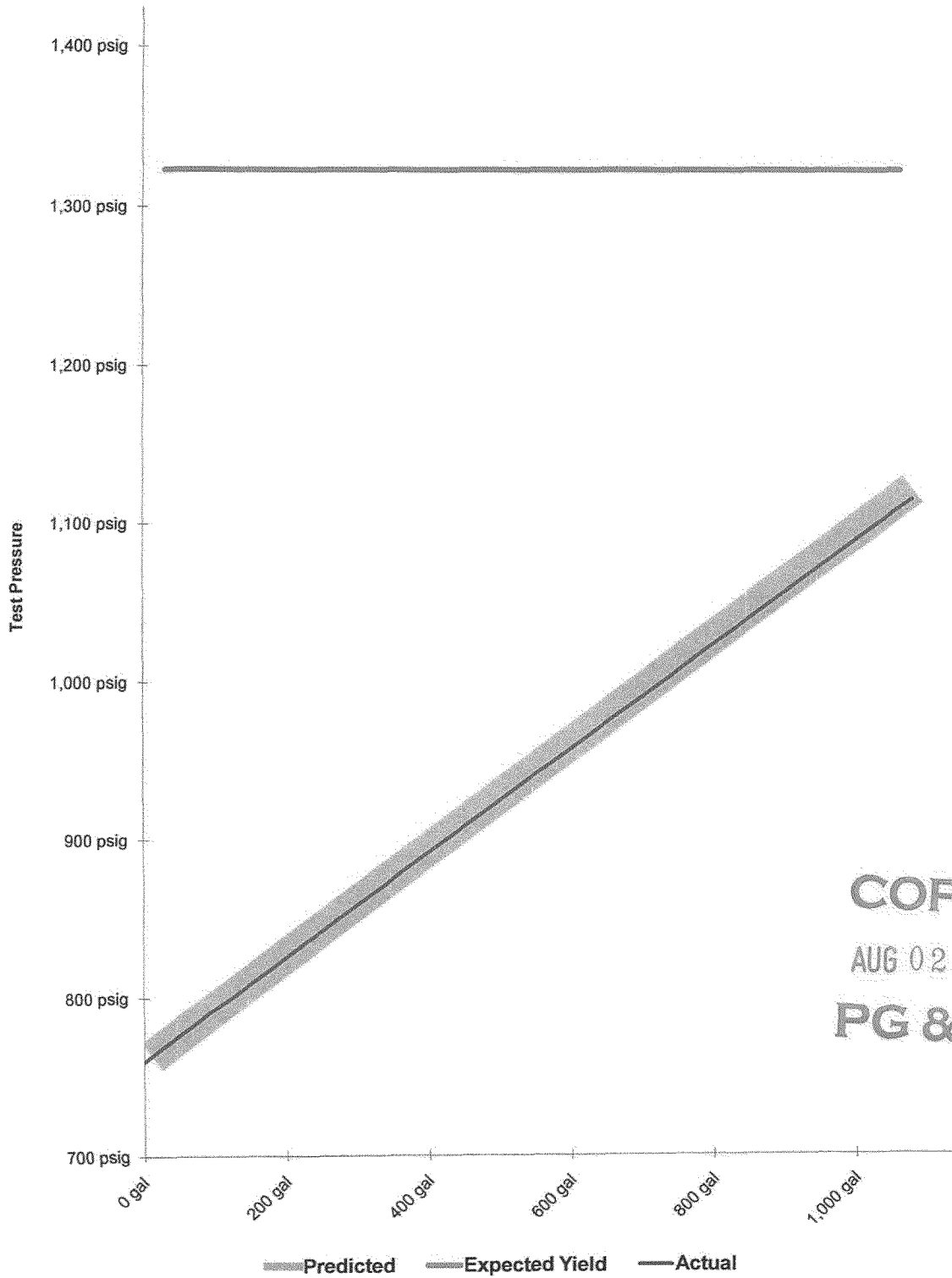
Owner Company	Pacific Gas and Electric Company	Job Number
Address	350 N. Wiget Walnut Creek, CA 94598 Attention: Redacted	41497310
Construction Company	Snelson	Job Number
Address	601 West State Street Sedro-Woolley, WA 98284 Attention: Redacted	41474005-T72
Hydrostatic Test Co.	Milbar Hydro-test Incorporated	Project No.
Address	P.O. Box 7701 Shreveport, Louisiana 71137-7701	FY12-112
Test Section	PG&E T-72 Line 300A, MP 493.59 - 496.05 From: 0+00 To: 129+37	
File Name	RCP 61362 - T-72, L-300A	

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 charged without written approval.			
Time and Date Test Pressure Reached	8/1/11 5:25 PM	Elevation at Test Point	126 ft	Min. Required Test Press At Test Point (1)	1,014.00 psig	Max. Allowable Test Press at Test Point (4)	1,138.30 psig
Time and Date Test Ended	8/2/11 2:15 AM	Max. Elevation in Test Section	126 ft	Min. Indicated Test Pressure (2)	1,028.00 psig	Max. Indicated Test Pressure (5)	1,115.00 psig
Actual Duration of Test	8 hours 50 minutes	Min. Elevation in Test Section	99 ft	Min. Test Pressure at Max. Elevation (3)	1,028.00 psig	Max. Test Pressure at Min. Elevation (6)	1,126.70 psig

PG&E T-72 Line 300A, MP 493.59 - 496.05



Spike Pressure Test
Stress Strain Curve -- PG&E T-72 Line 300A, MP 493.59 - 496.05



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