RCP, Inc

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

June 26, 2011

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

Test Contractor:	Milbar Hydro-test Incorporated -- FY12-112
Asset Owner:	Pacific Gas and Electric Company -- 41497307
Construction Contractor:	Snelson -- 41474005-T62
Test Section:	PG&E T-62 Line 300A
Test Date:	June 26, 2011
Certificate Number:	RCP 61362 - T-62, 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 1).

The test segment was subjected to a spike pressure test of 937 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 9 hour test duration period.

This hydrostatic test was completed successfully. Pressure was maintained on the test facilities in excess of 9 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 875 psig and the established MAOP is 795 psig.

Pressure decreased 58 psi during the test. 5,689.60 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 246.84 ounces, gain, which is equivalent to a 0.2 °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,

RCP

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cc. file

RCP

Company	Pacific Gas and Electric Company	Job Number	41497307
Construction Co.	Snelson	Job Number	41474005-T62
Hydro. Test Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-62 Line 300A		
File Name	RCP 61362 - T-62, L-300A		

Hydrostatic Test Pressure

APPLICABLE CODE FOR CERTIFICATION: Test Date: 26-Jun-11

Code of Federal Regulations, Title 49, Part 192, Subpart J (Class 1)

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-62 Line 300A
From: 0+00 To: 13+71

Pipe Data

Segment	Length	Diameter	Wall Thickness	Specification	100% SMYS
1	117 ft	34.000 in.	0.505 in.	API5L-X60, DSAW, Arc Weld, Steel	1,782 psi
2	26 ft	34.000 in.	0.375 in.	API5L-X60, DSAW, Arc Weld, Steel	1,324 psi
3	1,327 ft	34.000 in.	0.313 in.	API5L-X52, DSAW, Arc Weld, Steel	956 psi
4	40 ft	34.000 in.	0.500 in.	API5L-X65, DSAW, Arc Weld, Steel	1,912 psi

Initial Test Conditions

Pressure at Test Point:	937 psig	Date/Time:	6/26/11 9:15 AM	Pipe Temperature	
Ambient Temperature:	73.0 °F			Unrestrained:	89.0 °F
				Restrained:	83.0 °F
		Elevation @ Test Point:	368.0 ft	Location:	0+00
Pressure @ High Point (Cal/Measure):	934 psig	Elevation @ High Point:	376.0 ft	Location:	2+90
Pressure @ Low Point (Cal/Measure):	950 psig	Elevation @ Low Point:	339.0 ft	Location:	13+67

Final Test Conditions

Pressure at Test Point:	879 psig	Date/Time:	6/26/11 5:55 PM	Pipe Temperature	
Ambient Temperature:	94.0 °F			Unrestrained:	100.0 °F
				Restrained:	83.0 °F
		Elevation @ Test Point:	368.0 ft	Location:	0+00
Pressure @ High Point (Cal/Measure):	876 psig	Elevation @ High Point:	376.0 ft	Location:	2+90
Pressure @ Low Point (Cal/Measure):	892 psig	Elevation @ Low Point:	339.0 ft	Location:	13+67
	Total Fluid Injected:				
	Total Fluid Withdrawn:	5689.60 fluid ounces		**Volume gain**	
Net Change in Volume of the Test Section ± (+ Gain, - Loss):		246.84 oz	**gain**	0.0028%	0.205 °F equivalent

Test Duration: 9 hours

Minimum Test Pressure:	Test Point	868 psig	Max Elevation	865 psig	Min Elevation	881 psig
Maximum Test Pressure:		937 psig		934 psig		950 psig
% SMYS :		98.0%		97.7%		99.3%

Minimum Test Pressure (Calculated/Measured):			876 psig
Maximum Allowable Operating Pressure:	DOT Part 192	Test Factor= 1.10	795 psig

Were leaks observed?	**No**	Explain:
Acceptable Hydrostatic Test?	**Yes**	The test segment was subjected to a spike pressure test of 937 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 9 hour test duration period. No leaks were observed during the test period. The test section included 1,327 feet of buried and 235 feet of exposed pipe. Pressure lost 58 psi during the test. The buried pipe segment fluid temperature remained steady and the exposed pipe segment gained 11°F. 5,689.60 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 246.84 ounces, gain, which is equivalent to a 0.2 °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		Test was extended for an additional fifteen minutes to ensur the pressure and temperature charts included a full 8 continuous hours of data.

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26-Jun-11

RCP

Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41497307
Construction Co.	Snelson	Job Number	41474005-T62
Testing Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-62 Line 300A		
File Name	RCP 61362 - T-62, L-300A		

Date **26-Jun-11**

Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe				
					Unrestrained	Restrained	**Comment**	**Bleed**	**Inject**
1	6/26/11	8:45 AM	645 psig	73 °F	88 °F	83 °F	Start Spike		
2	6/26/11	8:46 AM	655 psig	73 °F	88 °F	83 °F	Inject		564 oz.
3	6/26/11	8:47 AM	665 psig	73 °F	88 °F	83 °F	Inject		564 oz.
4	6/26/11	8:48 AM	675 psig	73 °F	88 °F	83 °F	Inject		564 oz.
5	6/26/11	8:49 AM	685 psig	73 °F	88 °F	83 °F	Inject		564 oz.
6	6/26/11	8:50 AM	695 psig	73 °F	88 °F	83 °F	Inject		564 oz.
7	6/26/11	8:51 AM	705 psig	73 °F	88 °F	83 °F	Inject		564 oz.
8	6/26/11	8:52 AM	715 psig	73 °F	88 °F	83 °F	Inject		564 oz.
9	6/26/11	8:53 AM	725 psig	73 °F	88 °F	83 °F	Inject		564 oz.
10	6/26/11	8:54 AM	735 psig	73 °F	88 °F	83 °F	Inject		564 oz.
11	6/26/11	8:55 AM	745 psig	73 °F	88 °F	83 °F	Inject		635 oz.
12	6/26/11	8:56 AM	755 psig	73 °F	88 °F	83 °F	Inject		564 oz.
13	6/26/11	8:57 AM	765 psig	73 °F	88 °F	83 °F	Inject		564 oz.
14	6/26/11	8:58 AM	775 psig	73 °F	88 °F	83 °F	Inject		564 oz.
15	6/26/11	8:59 AM	785 psig	73 °F	88 °F	83 °F	Inject		564 oz.
16	6/26/11	9:00 AM	795 psig	73 °F	88 °F	83 °F	Inject		564 oz.
17	6/26/11	9:01 AM	805 psig	73 °F	88 °F	83 °F	Inject		564 oz.
18	6/26/11	9:02 AM	815 psig	73 °F	88 °F	83 °F	Inject		635 oz.
19	6/26/11	9:03 AM	825 psig	73 °F	88 °F	83 °F	Inject		564 oz.
20	6/26/11	9:04 AM	835 psig	73 °F	88 °F	83 °F	Inject		564 oz.
21	6/26/11	9:05 AM	845 psig	73 °F	88 °F	83 °F	Inject		564 oz.
22	6/26/11	9:06 AM	855 psig	73 °F	88 °F	83 °F	Inject		635 oz.
23	6/26/11	9:07 AM	865 psig	73 °F	88 °F	83 °F	Inject		564 oz.
24	6/26/11	9:08 AM	875 psig	73 °F	88 °F	83 °F	Inject		564 oz.
25	6/26/11	9:09 AM	885 psig	73 °F	88 °F	83 °F	Inject		635 oz.
26	6/26/11	9:10 AM	895 psig	73 °F	88 °F	83 °F	Inject		564 oz.
27	6/26/11	9:11 AM	905 psig	73 °F	88 °F	83 °F	Inject		635 oz.
28	6/26/11	9:12 AM	915 psig	73 °F	88 °F	83 °F	Inject		564 oz.
29	6/26/11	9:13 AM	925 psig	73 °F	88 °F	83 °F	Inject		635 oz.
30	6/26/11	9:14 AM	937 psig	73 °F	88 °F	83 °F	Inject		564 oz.
31	6/26/11	9:15 AM	937 psig	73 °F	89 °F	83 °F	On Test		
32	6/26/11	9:25 AM	936 psig	74 °F	90 °F	83 °F			
33	6/26/11	9:35 AM	936 psig	74 °F	90 °F	83 °F			
34	6/26/11	9:45 AM	937 psig	74 °F	90 °F	82 °F	End Spike		
35	6/26/11	9:46 AM	927 psig	74 °F	90 °F	82 °F	Bleed	448 oz.	
36	6/26/11	9:47 AM	917 psig	74 °F	90 °F	82 °F	Bleed	448 oz.	
37	6/26/11	9:48 AM	907 psig	74 °F	90 °F	82 °F	Bleed	448 oz.	
38	6/26/11	9:49 AM	897 psig	74 °F	90 °F	82 °F	Bleed	448 oz.	
39	6/26/11	9:51 AM	887 psig	74 °F	90 °F	82 °F	Bleed	448 oz.	
40	6/26/11	9:53 AM	877 psig	74 °F	90 °F	82 °F	Bleed	448 oz.	
41	6/26/11	9:55 AM	870 psig	75 °F	91 °F	82 °F	Bleed	314 oz.	
42	6/26/11	10:10 AM	872 psig	76 °F	91 °F	82 °F			
43	6/26/11	10:25 AM	873 psig	77 °F	92 °F	82 °F			

Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41497307
Construction Co.	Snelson	Job Number	41474005-T62
Testing Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-62 Line 300A		
File Name	RCP 61362 - T-62, L-300A		

Date **26-Jun-11**

Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe				
					Unrestrained	Restrained	**Comment**	**Bleed**	**Inject**
44	6/26/11	10:40 AM	873 psig	77 °F	93 °F	82 °F			
45	6/26/11	10:55 AM	875 psig	78 °F	94 °F	82 °F			
46	6/26/11	11:10 AM	875 psig	78 °F	94 °F	82 °F			
47	6/26/11	11:25 AM	878 psig	80 °F	95 °F	82 °F			
48	6/26/11	11:40 AM	880 psig	82 °F	96 °F	82 °F			
49	6/26/11	11:55 AM	882 psig	83 °F	96 °F	82 °F			
50	6/26/11	12:10 PM	868 psig	83 °F	97 °F	82 °F	Bleed	896 oz.	
51	6/26/11	12:25 PM	870 psig	83 °F	98 °F	82 °F			
52	6/26/11	12:40 PM	872 psig	88 °F	98 °F	82 °F			
53	6/26/11	12:55 PM	874 psig	89 °F	98 °F	82 °F			
54	6/26/11	1:10 PM	877 psig	89 °F	99 °F	82 °F			
55	6/26/11	1:25 PM	879 psig	91 °F	100 °F	82 °F	Hot		
56	6/26/11	1:40 PM	881 psig	92 °F	100 °F	82 °F			
57	6/26/11	1:55 PM	884 psig	93 °F	100 °F	82 °F			
58	6/26/11	2:10 PM	868 psig	93 °F	101 °F	83 °F	Bleed	896.00 oz.	
59	6/26/11	2:25 PM	872 psig	95 °F	102 °F	83 °F			
60	6/26/11	2:40 PM	875 psig	96 °F	102 °F	83 °F			
61	6/26/11	2:55 PM	877 psig	97 °F	102 °F	83 °F	Hot		
62	6/26/11	3:10 PM	879 psig	98 °F	102 °F	83 °F			
63	6/26/11	3:25 PM	881 psig	98 °F	103 °F	83 °F			
64	6/26/11	3:40 PM	883 psig	98 °F	103 °F	83 °F			
65	6/26/11	3:55 PM	869 psig	98 °F	103 °F	83 °F	Bleed	896.00 oz.	
66	6/26/11	4:10 PM	870 psig	99 °F	102 °F	83 °F			
67	6/26/11	4:25 PM	872 psig	98 °F	102 °F	83 °F			
68	6/26/11	4:40 PM	874 psig	98 °F	102 °F	83 °F	Hot		
69	6/26/11	4:55 PM	875 psig	98 °F	102 °F	83 °F			
70	6/26/11	5:10 PM	876 psig	97 °F	102 °F	83 °F			
71	6/26/11	5:25 PM	876 psig	97 °F	101 °F	83 °F			
72	6/26/11	5:40 PM	878 psig	97 °F	100 °F	83 °F			
73	6/26/11	5:55 PM	879 psig	94 °F	100 °F	83 °F	End of Test		

Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41497307
Construction Co.	Snelson	Job Number	41474005-T62
Testing Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-62 Line 300A		
File Name	RCP 61362 - T-62, L-300A		

Date **26-Jun-11**

Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe				
					Unrestrained	Restrained	**Comment**	**Bleed**	**Inject**
							Spike Test		16,779.5 oz.
							Hydrostatic Test	5,689.6 oz.	

Were leaks observed during the test period? Exposed and buried pipe, no leaks observed.

High Test Pressure:	937 psig
Low Test Pressure:	868 psig

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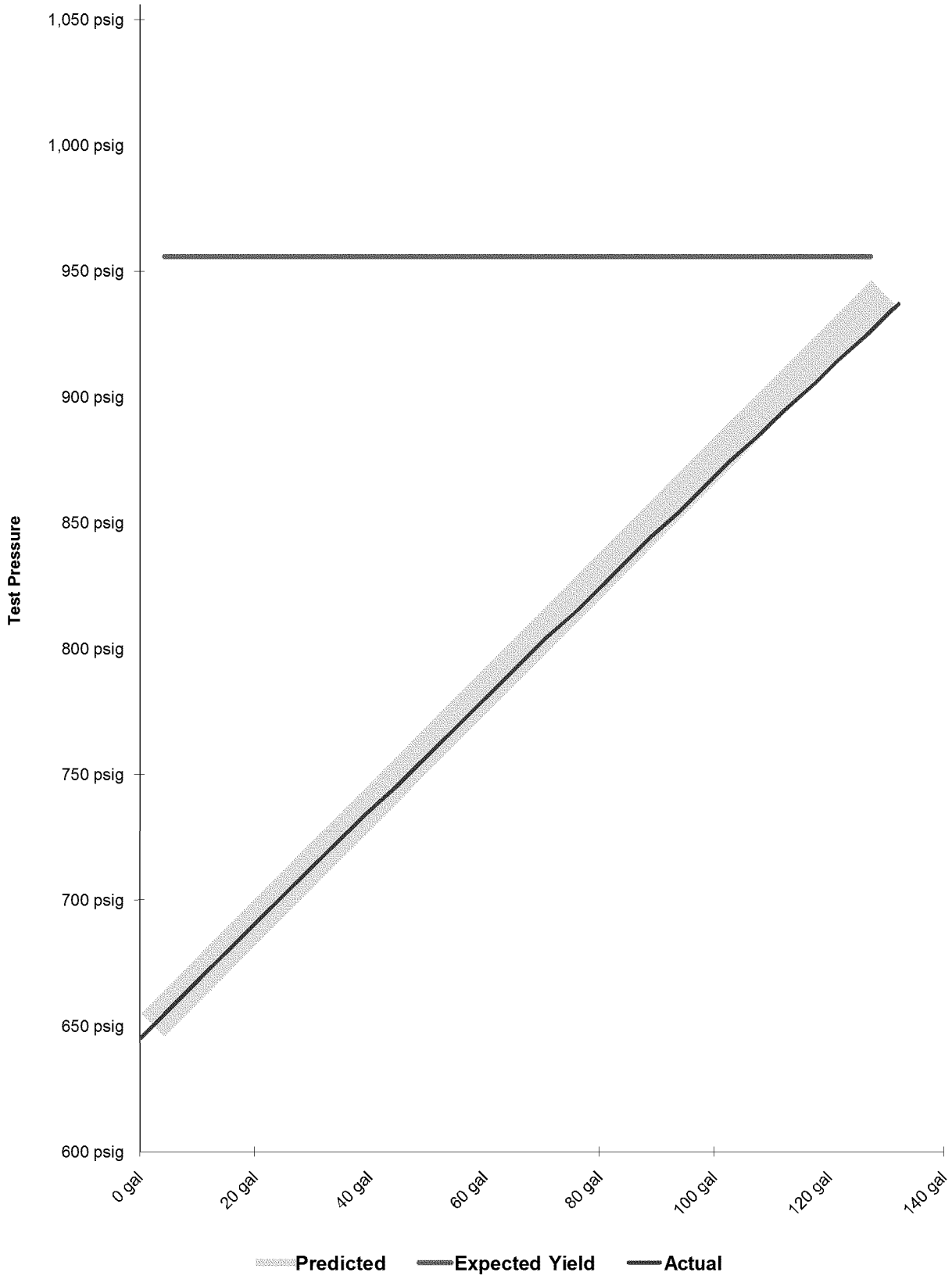
Spike Pressure Test
Stress Strain Curve -- PG&E T-62 Line 300A



6/26/2011

RCP

Spike Pressure Test
Stress Strain Curve -- PG&E T-62 Line 300A

Actual Pressure Volume Plot Data			Predicted Pressure Volume Plot Data	Slope	
Pressure	Strokes	Gallons	Gallons	Actual	Predicted
645 psig	0	0.00 gal		0	0.00 gal
655 psig	8	4.41 gal	4.36 gal	0.441	0.436
665 psig	16	8.81 gal	8.71 gal	0.441	0.436
675 psig	24	13.22 gal	13.07 gal	0.441	0.436
685 psig	32	17.63 gal	17.42 gal	0.441	0.436
695 psig	40	22.03 gal	21.78 gal	0.441	0.436
705 psig	48	26.44 gal	26.14 gal	0.441	0.436
715 psig	56	30.84 gal	30.49 gal	0.441	0.436
725 psig	64	35.25 gal	34.85 gal	0.441	0.436
735 psig	72	39.66 gal	39.21 gal	0.441	0.436
745 psig	81	44.61 gal	43.57 gal	0.496	0.436
755 psig	89	49.02 gal	47.93 gal	0.441	0.436
765 psig	97	53.43 gal	52.28 gal	0.441	0.436
775 psig	105	57.83 gal	56.64 gal	0.441	0.436
785 psig	113	62.24 gal	61.00 gal	0.441	0.436
795 psig	121	66.65 gal	65.36 gal	0.441	0.436
805 psig	129	71.05 gal	69.72 gal	0.441	0.436
815 psig	138	76.01 gal	74.08 gal	0.496	0.436
825 psig	146	80.42 gal	78.44 gal	0.441	0.436
835 psig	154	84.82 gal	82.80 gal	0.441	0.436
845 psig	162	89.23 gal	87.16 gal	0.441	0.436
855 psig	171	94.19 gal	91.52 gal	0.496	0.436
865 psig	179	98.59 gal	95.88 gal	0.441	0.436
875 psig	187	103.00 gal	100.24 gal	0.441	0.436
885 psig	196	107.96 gal	104.61 gal	0.496	0.436
895 psig	204	112.36 gal	108.97 gal	0.441	0.436
905 psig	213	117.32 gal	113.33 gal	0.496	0.436
915 psig	221	121.73 gal	117.69 gal	0.441	0.436
925 psig	230	126.68 gal	122.05 gal	0.496	0.436
935 psig	238	131.09 gal	126.42 gal	0.441	0.436
937 psig	240	132.19 gal	127.29 gal	0.551	0.436
937 psig		132.19 gal	127.29 gal	0.000	0.000
937 psig		132.19 gal	127.29 gal	0.000	0.000
937 psig		132.19 gal	127.29 gal	0.000	0.000
937 psig		132.19 gal	127.29 gal	0.000	0.000
937 psig		132.19 gal	127.29 gal	0.000	0.000
937 psig		132.19 gal	127.29 gal	0.000	0.000
937 psig		132.19 gal	127.29 gal	0.000	0.000
937 psig		132.19 gal	127.29 gal	0.000	0.000
937 psig		132.19 gal	127.29 gal	0.000	0.000
937 psig		132.19 gal	127.29 gal	0.000	0.000
937 psig		132.19 gal	127.29 gal	0.000	0.000
937 psig		132.19 gal	127.29 gal	0.000	0.000
937 psig		132.19 gal	127.29 gal	0.000	0.000

Pump gal per stroke	0.551 gal/stroke
Pump Piston Diameter	3.000 in
Pump Piston Stroke	6.00 in
Pump Cylinders	3 ea
Volume check gal per stroke	0.426 gal/stroke
Volume Released (gallons)	23.45 gal
Pressure Reduced (psi)	67 psi
Maximum2	140 gal
Minimum2	0 gal
Maximum1	1,056 psig
Minimum1	600 psig
Gallons/Stroke Used	0.551 gal/stroke
Predicted Gallons/Stroke	0.530 gal/stroke
Pressure Increment	10 psi
Max Pressure	937 psig
Buried Pipe Temperature	83 °F
Exposed Pipe Temperature	88 °F

ASME B31.8 Appendix N-5

Average Actual Elastic Slope	0.452
Average Predicted Elastic Slope	0.436
Code Prescribed Minimum Yield Slope (less 10%) B31.8 N-5 (c)(2)	0.860
Established Minimum Yield Pressure B31.8 N-5 (c)(2)	937 psig
Maximum Allowed Volume (After Slope Deviation) B31.8 N-5 (c)(2)	418 gal
Volume (After Slope Deviation) B31.8 N-5 (c)(2)	0 gal

Redacted P. E.

Date

SB_GT&S_0046827

Pipe Segment Volume Calculations

Company	Pacific Gas and Electric Company	Job Number	41497307
Construction Co.	Snelson	Job Number	41474005-T62
Hydro. Test Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-62 Line 300A		**WATER**
File Name	RCP 61362 - T-62, L-300A		

General Pipe Data

Description	Segment 1	2	3	4	5	6	7
Restrained or Unrestrained?	Unrestrained	Unrestrained	Restrained	Unrestrained	Unrestrained	Unrestrained	Unrestrained
Outside Diameter	34.000 in.	34.000 in.	34.000 in.	34.000 in.	12.750 in.	12.750 in.	34.000 in.
Wall Thickness	0.505 in.	0.375 in.	0.313 in.	0.500 in.	0.500 in.	0.375 in.	0.375 in.
Inside Diameter	32.990 in.	33.250 in.	33.375 in.	33.000 in.	11.750 in.	12.000 in.	33.250 in.
Spec./Grade	API5L-X60	API5L-X60	API5L-X52	API5L-X65	API5L-Grade B	API5L-Grade B	API5L-X65
Length Unrestrained	117 ft	26 ft		40 ft	24 ft	11 ft	17 ft
Length Restrained			1,327 ft				
Temperature -- On Test	89 °F	89 °F	83.0 °F	89.0 °F	89.0 °F	89.0 °F	89.0 °F
Temperature -- End of Test	100 °F	100 °F	83.0 °F	100.0 °F	100.0 °F	100.0 °F	100.0 °F
Pressure -- On Test	937 psig	937 psig	937 psig	937 psig	937 psig	937 psig	937 psig
Pressure -- End of Test	879 psig	879 psig	879 psig	879 psig	879 psig	879 psig	879 psig

Unrestrained Pipe

Sum:	Vo	9,111.94 gal 1,166,329 oz.	Vtp1	9,132.11 gal 1,168,910 oz.	Vtp2	9,111.67 gal 1,166,294 oz.

	Segment 1	2	4	5	6	7
Vo Unrestrained	5,195 gal	1,173 gal	1,777 gal	135 gal	65 gal	767 gal
Fwp 1	1.002871	1.002871	1.002871	1.002871	1.002871	1.002871
Fpp 1	1.002550	1.003462	1.002577	1.000917	1.001249	1.003462
Fpt 1	1.000528	1.000528	1.000528	1.000528	1.000528	1.000528
Fwt 1	1.003903	1.003903	1.003903	1.003903	1.003903	1.003903
Fpwt 1 = Fpt/Fwt	0.996638	0.996638	0.996638	0.996638	0.996638	0.996638
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	5,205.93 gal	1,176.25 gal	1,780.93 gal	135.25 gal	64.68 gal	769.09 gal
Fwp 2	1.002693	1.002693	1.002693	1.002693	1.002693	1.002693
Fpp 2	1.002393	1.003247	1.002417	1.000861	1.001172	1.003247
Fpt 2	1.000728	1.000728	1.000728	1.000728	1.000728	1.000728
Fwt 2	1.006009	1.006009	1.006009	1.006009	1.006009	1.006009
Fpwt = Fpt/Fwt	0.994751	0.994751	0.994751	0.994751	0.994751	0.994751
Vtp = Vo(Fwp)(Fpp)(Fpwt)	5,194.33 gal	1,173.56 gal	1,776.96 gal	134.96 gal	64.54 gal	767.33 gal

Restrained Pipe

Sum:	Vo	60,307.68 gal 7,719,383 oz.	Vtp1	60,512.71 gal 7,745,627 oz.	Vtp2	60,490.63 gal 7,742,801 oz.

	Segment 3
Vo Unrestrained	60,308 gal
Fwp 1	1.002871
Fpp 1	1.003118
Fpt 1	1.000278
Fwt 1	1.002868
Fpwt 1 = Fpt/Fwt	0.997417
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	60,513 gal
Fwp 2	1.002693
Fpp 2	1.002930
Fpt 2	1.000278
Fwt 2	1.002868
Fpwt = Fpt/Fwt	0.997417
Vtp = Vo(Fwp)(Fpp)(Fpwt)	60,491 gal

Combined Pipe

Sum:	Vo	69,419.62 gal 8,885,712 oz.	Vtp1	69,644.83 gal 8,914,538 oz.	Vtp2	69,602.31 gal 8,909,095 oz.

Pipe Segment Volume Allowance Calculations

Company	Pacific Gas and Electric Company	Job Number	41497307
Construction Co.	Snelson	Job Number	41474005-T62
Hydro. Test Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-62 Line 300A		**WATER**
File Name	RCP 61362 - T-62, L-300A		

General Pipe Data

Description	Segment 1	2	3	4	5	6	7
Restrained or Unrestrained?	Unrestrained	Unrestrained	Restrained	Unrestrained	Unrestrained	Unrestrained	Unrestrained
Outside Diameter	34.000 in.	34.000 in.	34.000 in.	34.000 in.	12.750 in.	12.750 in.	34.000 in.
Wall Thickness	0.505 in.	0.375 in.	0.313 in.	0.500 in.	0.500 in.	0.375 in.	0.375 in.
Inside Diameter	32.990 in.	33.250 in.	33.375 in.	33.000 in.	11.750 in.	12.000 in.	33.250 in.
Spec./Grade	API5L-X60	API5L-X60	API5L-X52	API5L-X65	API5L-Grade B	API5L-Grade B	API5L-X65
Length Unstrained	117.00 ft	26.00 ft		40 ft	24 ft	11 ft	17 ft
Length Restrained			1,327 ft				
Temperature -- On Test	94 °F	94 °F	82 °F	94 °F	94 °F	94 °F	94 °F
Temperature -- End of Test	95 °F	95 °F	83 °F	95 °F	95 °F	95 °F	95 °F
Pressure -- On Test	908 psig	908 psig	908 psig	908 psig	908 psig	908 psig	908 psig
Pressure -- End of Test	908 psig	908 psig	908 psig	908 psig	908 psig	908 psig	908 psig

Unrestrained Pipe

Sum:	Vo	9,111.94 gal 1,166,329 oz.	Vtp1	9,123.24 gal 1,167,775 oz.	Vtp2	9,121.53 gal 1,167,556 oz.

	1	2	3	4	5	6	7
Vo Unrestrained	5,195 gal	1,173 gal		1,777 gal	135 gal	65 gal	767 gal
Fwp 1	1.002782	1.002782		1.002782	1.002782	1.002782	1.002782
Fpp 1	1.002472	1.003355		1.002497	1.000889	1.001211	1.003355
Fpt 1	1.000619	1.000619		1.000619	1.000619	1.000619	1.000619
Fwt 1	1.004797	1.004797		1.004797	1.004797	1.004797	1.004797
Fpwt 1 = Fpt/Fwt	0.995842	0.995842		0.995842	0.995842	0.995842	0.995842
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	5,200.90 gal	1,175.08 gal		1,779.21 gal	135.12 gal	64.62 gal	768.32 gal
Fwp 2	1.002782	1.002782		1.002782	1.002782	1.002782	1.002782
Fpp 2	1.002472	1.003355		1.002497	1.000889	1.001211	1.003355
Fpt 2	1.000637	1.000637		1.000637	1.000637	1.000637	1.000637
Fwt 2	1.005004	1.005004		1.005004	1.005004	1.005004	1.005004
Fpwt = Fpt/Fwt	0.995654	0.995654		0.995654	0.995654	0.995654	0.995654
Vtp = Vo(Fwp)(Fpp)(Fpwt)	5,199.92 gal	1,174.86 gal		1,778.87 gal	135.10 gal	64.60 gal	768.18 gal

Restrained Pipe

Sum:	Vo	60,307.68 gal 7,719,383 oz.	Vtp1	60,509.37 gal 7,745,199 oz.	Vtp2	60,501.67 gal 7,744,214 oz.

	1	2	3	4	5	6	7
Vo Restrained			60,308 gal				
Fwp 1			1.002782				
Fpp 1			1.003021				
Fpt 1			1.000266				
Fwt 1			1.002725				
Fpwt 1 = Fpt/Fwt			0.997548				
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)			60,509 gal				
Fwp 2			1.002782				
Fpp 2			1.003024				
Fpt 2			1.000278				
Fwt 2			1.002868				
Fpwt = Fpt/Fwt			0.997417				
Vtp = Vo(Fwp)(Fpp)(Fpwt)			60,502 gal				

Combined Pipe

Sum:	Vo	69,419.62 gal 8,885,712 oz.	Vtp1	69,632.61 gal 8,912,974 oz.	Vtp2	69,623.20 gal 8,911,770 oz.
1 °F Change	9.41 gal	1,204.64 oz.				

RCP

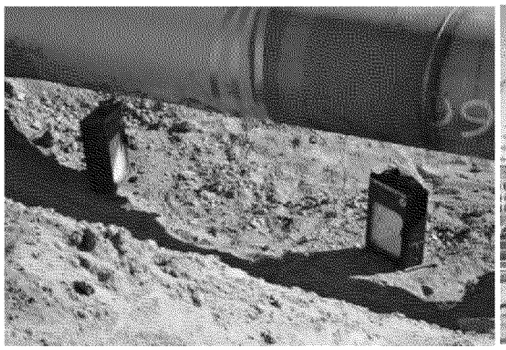
Hydrostatic Test Pipe Data Table

Pipe Type	Length	Restrained / Unrestrained	Outside Diameter	Wall Thickness	Specification & Grade	Pipe Yield Pressure	Material	Joint Type	Seam Type
1	117 ft	Unrestrained	34.000 in.	0.5050 in.	API5L-X60	1,782 psig	Steel	Arc Weld	DSAW
2	26 ft	Unrestrained	34.000 in.	0.3750 in.	API5L-X60	1,324 psig	Steel	Arc Weld	DSAW
3	1,327 ft	Restrained	34.000 in.	0.3125 in.	API5L-X52	956 psig	Steel	Arc Weld	DSAW
4	40 ft	Unrestrained	34.000 in.	0.5000 in.	API5L-X65	1,912 psig	Steel	Arc Weld	DSAW
5	24 ft	Unrestrained	12.750 in.	0.5000 in.	API5L-Grade B	2,745 psig	Steel	Arc Weld	SM
6	11 ft	Unrestrained	12.750 in.	0.3750 in.	API5L-Grade B	2,059 psig	Steel	Arc Weld	SM
7	17 ft	Unrestrained	34.000 in.	0.3750 in.	API5L-X65	1,434 psig	Steel	Arc Weld	DSAW

Hydrostatic Test Project Owner & Participants

Owner Company	Pacific Gas and Electric Company	Job Number
Address	3600 Adobe Rd Petaluma, Ca 94954 Attention: Redacted	41497307
Construction Company	Snelson	Job Number
Address	601 West State Street Sedro-Woolley, WA 98284 Attention: Redacted	41474005-T62
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-62 Line 300A From: 0+00 To: 13+71	
File Name	RCP 61362 - T-62, L-300A	

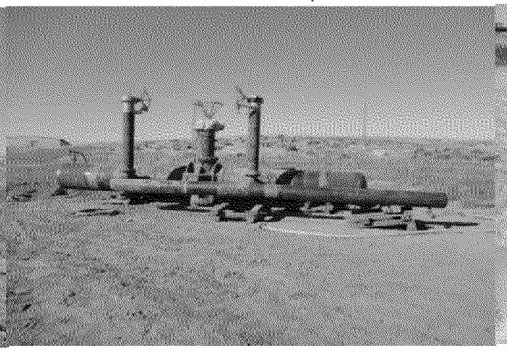
T-62 Pump Truck



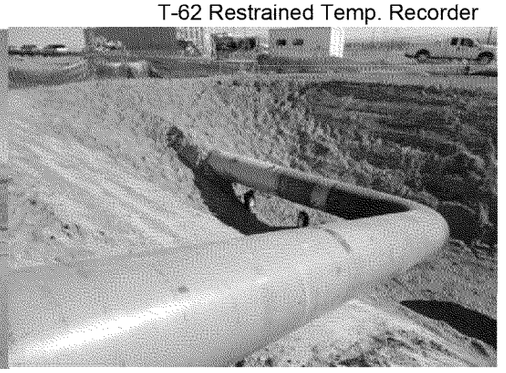
T-62 Unrestrained Temp. Recorder

T-62 Restrained Temp. Recorder

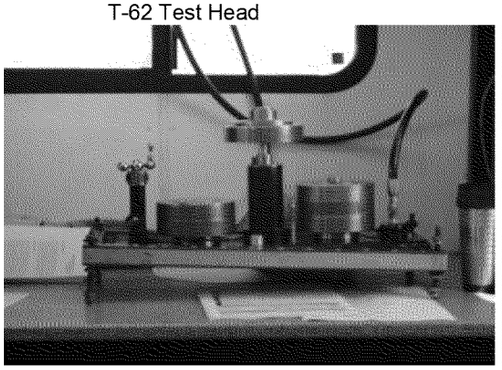
T-62 Test Head



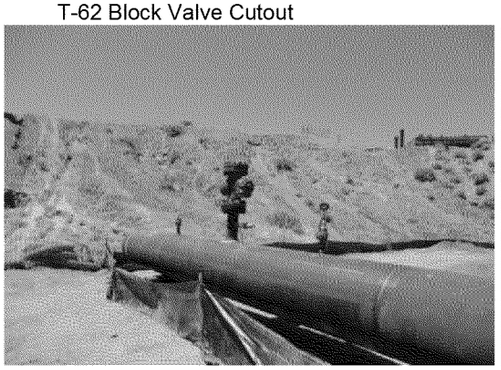
T-62 Block Valve Cutout



T-62 Test Head Location



T-62 Deadweight Tester



T-62 Test
End

T-62 Test
End