RCP

RCP, Inc

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

July 12, 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 -- 41474053
Construction Contractor:	Snelson -- 41474053-T52
Test Section:	PG&E T-52 Line 300A MP 121.8722 - 122.6788
Test Date:	June 6, 2011
Certificate Number:	RCP 61362 - T-52, 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).

Upon initiation of the hydrostatic test period, the test segment was subjected to a spike pressure of 940 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 882 psig and the established MAOP is 802 psig.

Pressure decreased 57 psi during the test. 10,991.14 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 2,687.76 ounces, loss, which is equivalent to a 0.7 °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

cc. file

RCP

Hydrostatic Test Certification

Company	Pacific Gas and Electric Company	Job Number	41474053
Construction Co.	Snelson	Job Number	41474053-T52
Hydro. Test Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-52 Line 300A MP 121.8722 - 122.6788		
File Name	RCP 61362 - T-52, L-300A		

Hydrostatic Test Pressure

APPLICABLE CODE FOR CERTIFICATION: Test Date: 6-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-52 Line 300A MP 121.8722 - 122.6788		
From:	47+45	To:	00+00

Pipe Data

Segment	Length	Diameter	Wall Thickness	Specification	100% SMYS
1	4,745.00 ft	34.000 in.	0.313 in.	API5L-X52, DSAW, Arc Weld, Steel	956 psi
2	40.00 ft	34.000 in.	0.505 in.	API5L-X60, DSAW, Arc Weld, Steel	1,782 psi
3	20.00 ft	34.000 in.	0.375 in.	API5L-X60, DSAW, Arc Weld, Steel	1,324 psi
4	22 ft	34.000 in.	0.500 in.	API5L-X60, DSAW, Arc Weld, Steel	1,765 psi

Initial Test Conditions

Pressure at Test Point:	940 psig	Date/Time:	6/6/11 11:46 AM	Pipe Temperature	
				Unrestrained:	76.0 °F
Ambient Temperature:	81.0 °F			Restrained:	76.0 °F
		Elevation @ Test Point:	1,793.0 ft	Location:	47+45
Pressure @ High Point (Cal/Measure):	940 psig	Elevation @ High Point:	1,794.0 ft	Location:	25+00
Pressure @ Low Point (Cal/Measure):	940 psig	Elevation @ Low Point:	1,792.0 ft	Location:	00+00

Final Test Conditions

Pressure at Test Point:	883 psig	Date/Time:	6/6/11 8:01 PM	Pipe Temperature	
				Unrestrained:	72.0 °F
Ambient Temperature:	73.0 °F			Restrained:	77.0 °F
		Elevation @ Test Point:	1,793.0 ft	Location:	47+45
Pressure @ High Point (Cal/Measure):	883 psig	Elevation @ High Point:	1,794.0 ft	Location:	25+00
Pressure @ Low Point (Cal/Measure):	883 psig	Elevation @ Low Point:	1,792.0 ft	Location:	00+00

Total Fluid Injected:			Volume loss	
Total Fluid Withdrawn:	10991.14 fluid ounces			
Net Change in Volume of the Test Section ± (+ Gain, - Loss):	(2,687.76) oz	loss	(0.0095)%	(0.701) °F equivalent

Test Duration:	8 hours				
Maximum Test Pressure:	940 psig				
% SMYS @:	98.3%	Test Point	98.3%	High Point	98.4% Low Point
			Minimum Test Pressure (Calculated/Measured):		883 psig
Maximum Allowable Operating Pressure:		DOT Part 192	Test Factor= 1.10		802 psig

Were leaks observed?	**No**	Explain:
Acceptable Hydrostatic Test?	**Yes**	Upon initiation of the hydrostatic test period, the test segment was subjected to a spike pressure of 940 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 4,745 feet of buried and 82 feet of exposed pipe. Pressure lost 57 psi during the test. The buried pipe segment gained 1°F fluid temperature and the exposed pipe segment lost 4°F. 10,991.14 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 2,687.76 ounces, loss, which is equivalent to a 0.7 °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.
Remarks		

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12-Jul-11

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Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41474053
Construction Co.	Snelson	Job Number	41474053-T52
Testing Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-52 Line 300A MP 121.8722 - 122.6788		
File Name	RCP 61362 - T-52, L-300A		

Date **6-Jun-11**

Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
					Pipe				
	Date	Time		Ambient	Unrestrained	Restrained	Comment	Bleed	Inject
1	6/6/11	11:14 AM	646 psig	81 °F	75 °F	76 °F	Start Spike		
2	6/6/11	11:15 AM	650 psig	81 °F	75 °F	76 °F			1,005 oz.
3	6/6/11	11:16 AM	660 psig	81 °F	75 °F	76 °F			1,340 oz.
4	6/6/11	11:17 AM	670 psig	81 °F	75 °F	76 °F			1,808 oz.
5	6/6/11	11:18 AM	680 psig	81 °F	75 °F	76 °F			1,808 oz.
6	6/6/11	11:19 AM	690 psig	81 °F	75 °F	76 °F			1,674 oz.
7	6/6/11	11:20 AM	700 psig	81 °F	75 °F	76 °F			1,808 oz.
8	6/6/11	11:21 AM	710 psig	81 °F	75 °F	76 °F			1,808 oz.
9	6/6/11	11:22 AM	720 psig	81 °F	76 °F	76 °F			1,741 oz.
10	6/6/11	11:23 AM	730 psig	81 °F	76 °F	76 °F			1,808 oz.
11	6/6/11	11:24 AM	740 psig	81 °F	76 °F	76 °F			1,808 oz.
12	6/6/11	11:25 AM	750 psig	81 °F	76 °F	76 °F			1,741 oz.
13	6/6/11	11:26 AM	760 psig	81 °F	76 °F	76 °F			1,808 oz.
14	6/6/11	11:28 AM	770 psig	81 °F	76 °F	76 °F			1,741 oz.
15	6/6/11	11:29 AM	780 psig	81 °F	76 °F	76 °F			1,741 oz.
16	6/6/11	11:30 AM	790 psig	81 °F	76 °F	76 °F			1,808 oz.
17	6/6/11	11:31 AM	800 psig	81 °F	76 °F	76 °F			1,808 oz.
18	6/6/11	11:32 AM	810 psig	81 °F	76 °F	76 °F			1,741 oz.
19	6/6/11	11:33 AM	820 psig	81 °F	76 °F	76 °F			1,808 oz.
20	6/6/11	11:34 AM	830 psig	81 °F	76 °F	76 °F			1,741 oz.
21	6/6/11	11:35 AM	840 psig	81 °F	76 °F	76 °F			1,808 oz.
22	6/6/11	11:36 AM	850 psig	81 °F	76 °F	76 °F			1,808 oz.
23	6/6/11	11:37 AM	860 psig	81 °F	76 °F	76 °F			1,741 oz.
24	6/6/11	11:38 AM	870 psig	81 °F	76 °F	76 °F			1,875 oz.
25	6/6/11	11:39 AM	880 psig	81 °F	76 °F	76 °F			1,808 oz.
26	6/6/11	11:40 AM	890 psig	81 °F	76 °F	76 °F			1,741 oz.
27	6/6/11	11:41 AM	900 psig	81 °F	76 °F	76 °F			1,875 oz.
28	6/6/11	11:42 AM	910 psig	81 °F	76 °F	76 °F			1,808 oz.
29	6/6/11	11:43 AM	920 psig	81 °F	76 °F	76 °F			1,808 oz.
30	6/6/11	11:44 AM	930 psig	81 °F	76 °F	76 °F			1,808 oz.
31	6/6/11	11:45 AM	940 psig	81 °F	76 °F	76 °F			1,942 oz.
32	6/6/11	11:46 AM	940 psig	81 °F	76 °F	76 °F	On Test		
33	6/6/11	11:55 AM	940 psig	81 °F	76 °F	76 °F			
34	6/6/11	12:05 PM	940 psig	82 °F	76 °F	76 °F			
35	6/6/11	12:16 PM	940 psig	82 °F	76 °F	76 °F	End Spike		
36	6/6/11	12:20 PM	937 psig	82 °F	76 °F	76 °F		626 oz.	
37	6/6/11	12:29 PM	878 psig	80 °F	76 °F	76 °F		10,365 oz.	
38	6/6/11	12:39 PM	878 psig	80 °F	76 °F	76 °F			
39	6/6/11	12:45 PM	878 psig	81 °F	76 °F	77 °F			
40	6/6/11	1:00 PM	878 psig	82 °F	77 °F	77 °F			
41	6/6/11	1:15 PM	878 psig	82 °F	77 °F	77 °F			
42	6/6/11	1:30 PM	879 psig	82 °F	77 °F	77 °F			
43	6/6/11	1:45 PM	879 psig	82 °F	77 °F	77 °F			

Dead Weight Log Sheet

RCP

Owner Company	Pacific Gas and Electric Company	Job Number	41474053
Construction Co.	Snelson	Job Number	41474053-T52
Testing Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-52 Line 300A MP 121.8722 - 122.6788		
File Name	RCP 61362 - T-52, L-300A		

Date **6-Jun-11**

Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe Unrestrained	Pipe Restrained	**Comment**	**Bleed**	**Inject**
44	6/6/11	2:00 PM	880 psig	82 °F	80 °F	77 °F			
45	6/6/11	2:15 PM	880 psig	82 °F	80 °F	77 °F			
46	6/6/11	2:30 PM	880 psig	83 °F	80 °F	77 °F			
47	6/6/11	2:45 PM	881 psig	84 °F	80 °F	77 °F			
48	6/6/11	3:00 PM	881 psig	84 °F	80 °F	77 °F			
49	6/6/11	3:15 PM	881 psig	83 °F	80 °F	77 °F			
50	6/6/11	3:30 PM	882 psig	83 °F	80 °F	77 °F			
51	6/6/11	3:45 PM	882 psig	81 °F	80 °F	77 °F			
52	6/6/11	4:00 PM	882 psig	81 °F	80 °F	77 °F			
53	6/6/11	4:15 PM	882 psig	81 °F	80 °F	77 °F			
54	6/6/11	4:30 PM	882 psig	81 °F	80 °F	77 °F			
55	6/6/11	4:45 PM	883 psig	81 °F	79 °F	77 °F			
56	6/6/11	5:00 PM	883 psig	81 °F	79 °F	77 °F			
57	6/6/11	5:15 PM	883 psig	81 °F	79 °F	77 °F			
58	6/6/11	5:30 PM	883 psig	81 °F	79 °F	77 °F			
59	6/6/11	5:45 PM	883 psig	80 °F	79 °F	77 °F			
60	6/6/11	6:00 PM	883 psig	79 °F	78 °F	77 °F			
61	6/6/11	6:15 PM	883 psig	79 °F	77 °F	77 °F			
62	6/6/11	6:30 PM	883 psig	78 °F	76 °F	77 °F			
63	6/6/11	6:45 PM	883 psig	77 °F	75 °F	77 °F			
64	6/6/11	7:00 PM	883 psig	77 °F	74 °F	77 °F			
65	6/6/11	7:15 PM	883 psig	75 °F	74 °F	77 °F			
66	6/6/11	7:30 PM	883 psig	75 °F	73 °F	77 °F			
67	6/6/11	7:45 PM	883 psig	74 °F	72 °F	77 °F			
68	6/6/11	8:01 PM	883 psig	73 °F	72 °F	77 °F	End of Test		
							Spike Test		52,577.3 oz.
							Hydrostatic Test	10,991.1 oz.	

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

High Test Pressure:	940 psig
Low Test Pressure:	878 psig

Pipe Segment Volume Calculations

Company	Pacific Gas and Electric Company	Job Number	41474053
Construction Co.	Snelson	Job Number	41474053-T52
Hydro. Test Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-52 Line 300A MP 121.8722 - 122.6788		
File Name	RCP 61362 - T-52, L-300A	**WATER**	

General Pipe Data

Description	Segment 1	2	3	4
Restrained or Unrestrained?	Restrained	Unrestrained	Unrestrained	Unrestrained
Outside Diameter	34.000 in.	34.000 in.	34.000 in.	34.000 in.
Wall Thickness	0.313 in.	0.505 in.	0.375 in.	0.500 in.
Inside Diameter	33.375 in.	32.990 in.	33.250 in.	33.000 in.
Spec./Grade	API5L-X52	API5L-X60	API5L-X60	API5L-X60
Length Unrestrained		40 ft	20 ft	22 ft
Length Restrained	4,745 ft			
Temperature -- On Test	76 °F	76 °F	76.0 °F	76.0 °F
Temperature -- End of Test	77 °F	72 °F	72.0 °F	72.0 °F
Pressure -- On Test	940 psig	940 psig	940 psig	940 psig
Pressure -- End of Test	883 psig	883 psig	883 psig	883 psig

Unrestrained Pipe

Sum:	Vo	3,655.79 gal 467,941 oz.	Vtp1	3,670.97 gal 469,884 oz.	Vtp2	3,671.38 gal 469,937 oz.

	1	2	3	4
Vo Unrestrained		1,776 gal	902 gal	977 gal
Fwp 1		1.002880	1.002880	1.002880
Fpp 1		1.002559	1.003473	1.002585
Fpt 1		1.000291	1.000291	1.000291
Fwt 1		1.001813	1.001813	1.001813
Fpwt 1 = Fpt/Fwt		0.998481	0.998481	0.998481
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		1,783.13 gal	906.50 gal	981.34 gal
Fwp 2		1.002705	1.002705	1.002705
Fpp 2		1.002403	1.003262	1.002428
Fpt 2		1.000218	1.000218	1.000218
Fwt 2		1.001283	1.001283	1.001283
Fpwt = Fpt/Fwt		0.998937	0.998937	0.998937
Vtp = Vo(Fwp)(Fpp)(Fpwt)		1,783.35 gal	906.56 gal	981.46 gal

Restrained Pipe

Sum:	Vo	215,644.27 gal 27,602,466 oz.	Vtp1	216,585.67 gal 27,722,966 oz.	Vtp2	216,478.39 gal 27,709,234 oz.

	1
Vo Unrestrained	215,644 gal
Fwp 1	1.002880
Fpp 1	1.003103
Fpt 1	1.000194
Fwt 1	1.001813
Fpwt 1 = Fpt/Fwt	0.998384
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	216,586 gal
Fwp 2	1.002705
Fpp 2	1.002922
Fpt 2	1.000206
Fwt 2	1.001966
Fpwt = Fpt/Fwt	0.998243
Vtp = Vo(Fwp)(Fpp)(Fpwt)	216,478 gal

Combined Pipe

Sum:	Vo	219,300.05 gal 28,070,407 oz.	Vtp1	220,256.64 gal 28,192,850 oz.	Vtp2	220,149.77 gal 28,179,171 oz.

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Pipe Segment Volume Allowance Calculations

Company	Pacific Gas and Electric Company	Job Number	41474053
Construction Co.	Snelson	Job Number	41474053-T52
Hydro. Test Co.	Milbar Hydro-test Incorporated	Project No.	FY12-112
Test Section	PG&E T-52 Line 300A MP 121.8722 - 122.6788		**WATER**
File Name	RCP 61362 - T-52, L-300A		

General Pipe Data

Description	Segment 1	Segment 2	Segment 3	Segment 4
Restrained or Unrestrained?	Restrained	Unrestrained	Unrestrained	Unrestrained
Outside Diameter	34.000 in.	34.000 in.	34.000 in.	34.000 in.
Wall Thickness	0.313 in.	0.505 in.	0.375 in.	0.500 in.
Inside Diameter	33.375 in.	32.990 in.	33.250 in.	33.000 in.
Spec./Grade	API5L-X52	API5L-X60	API5L-X60	API5L-X60
Length Unstrained		40.00 ft	20.00 ft	22 ft
Length Restrained	4,745 ft			
Temperature -- On Test	76 °F	73 °F	73 °F	73 °F
Temperature -- End of Test	77 °F	74 °F	74 °F	74 °F
Pressure -- On Test	911 psig	911 psig	911 psig	911 psig
Pressure -- End of Test	911 psig	911 psig	911 psig	911 psig

Unrestrained Pipe

Sum:	Vo	3,655.79 gal 467,941 oz.	Vtp1	3,671.55 gal 469,959 oz.	Vtp2	3,671.18 gal 469,911 oz.

	1	2	3	4
Vo Unrestrained		1,776 gal	902 gal	977 gal
Fwp 1		1.002791	1.002791	1.002791
Fpp 1		1.002480	1.003366	1.002505
Fpt 1		1.000237	1.000237	1.000237
Fwt 1		1.001423	1.001423	1.001423
Fpwt 1 = Fpt/Fwt		0.998815	0.998815	0.998815
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		1,783.43 gal	906.62 gal	981.50 gal
Fwp 2		1.002791	1.002791	1.002791
Fpp 2		1.002480	1.003366	1.002505
Fpt 2		1.000255	1.000255	1.000255
Fwt 2		1.001542	1.001542	1.001542
Fpwt = Fpt/Fwt		0.998715	0.998715	0.998715
Vtp = Vo(Fwp)(Fpp)(Fpwt)		1,783.25 gal	906.53 gal	981.40 gal

Restrained Pipe

Sum:	Vo	215,644.27 gal 27,602,466 oz.	Vtp1	216,546.15 gal 27,717,907 oz.	Vtp2	216,516.54 gal 27,714,118 oz.

	1
Vo Restrained	215,644 gal
Fwp 1	1.002791
Fpp 1	1.003009
Fpt 1	1.000194
Fwt 1	1.001813
Fpwt 1 = Fpt/Fwt	0.998384
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	216,546 gal
Fwp 2	1.002791
Fpp 2	1.003012
Fpt 2	1.000206
Fwt 2	1.001966
Fpwt = Fpt/Fwt	0.998243
Vtp = Vo(Fwp)(Fpp)(Fpwt)	216,517 gal

Combined Pipe

Sum:	Vo	219,300.05 gal 28,070,407 oz.	Vtp1	220,217.70 gal 28,187,866 oz.	Vtp2	220,187.73 gal 28,184,029 oz.
1 °F Change	29.98 gal		3,836.81 oz.			

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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	4,745 ft	Restrained	34.000 in.	0.3125 in.	API5L-X52	956 psig	Steel	Arc Weld	DSAW
2	40 ft	Unrestrained	34.000 in.	0.5050 in.	API5L-X60	1,782 psig	Steel	Arc Weld	DSAW
3	20 ft	Unrestrained	34.000 in.	0.3750 in.	API5L-X60	1,324 psig	Steel	Arc Weld	DSAW
4	22 ft	Unrestrained	34.000 in.	0.5000 in.	API5L-X60	1,765 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	41474053
Construction Company	Snelson	Job Number
Address	601 West State Street Sedro-Woolley, WA 98284 Attention: Redacted	41474053-T52
Hydrostatic Test Co.	Milbar Hydro-test Incorporated	Project No.
Address	P. O. Box 7701 Shreveport, Louisiana 71137-7701 Attention: Redacted	FY12-112
Test Section	PG&E T-52 Line 300A MP 121.8722 - 122.6788 From: 47+45 To: 00+00	
File Name	RCP 61362 - T-52, L-300A	

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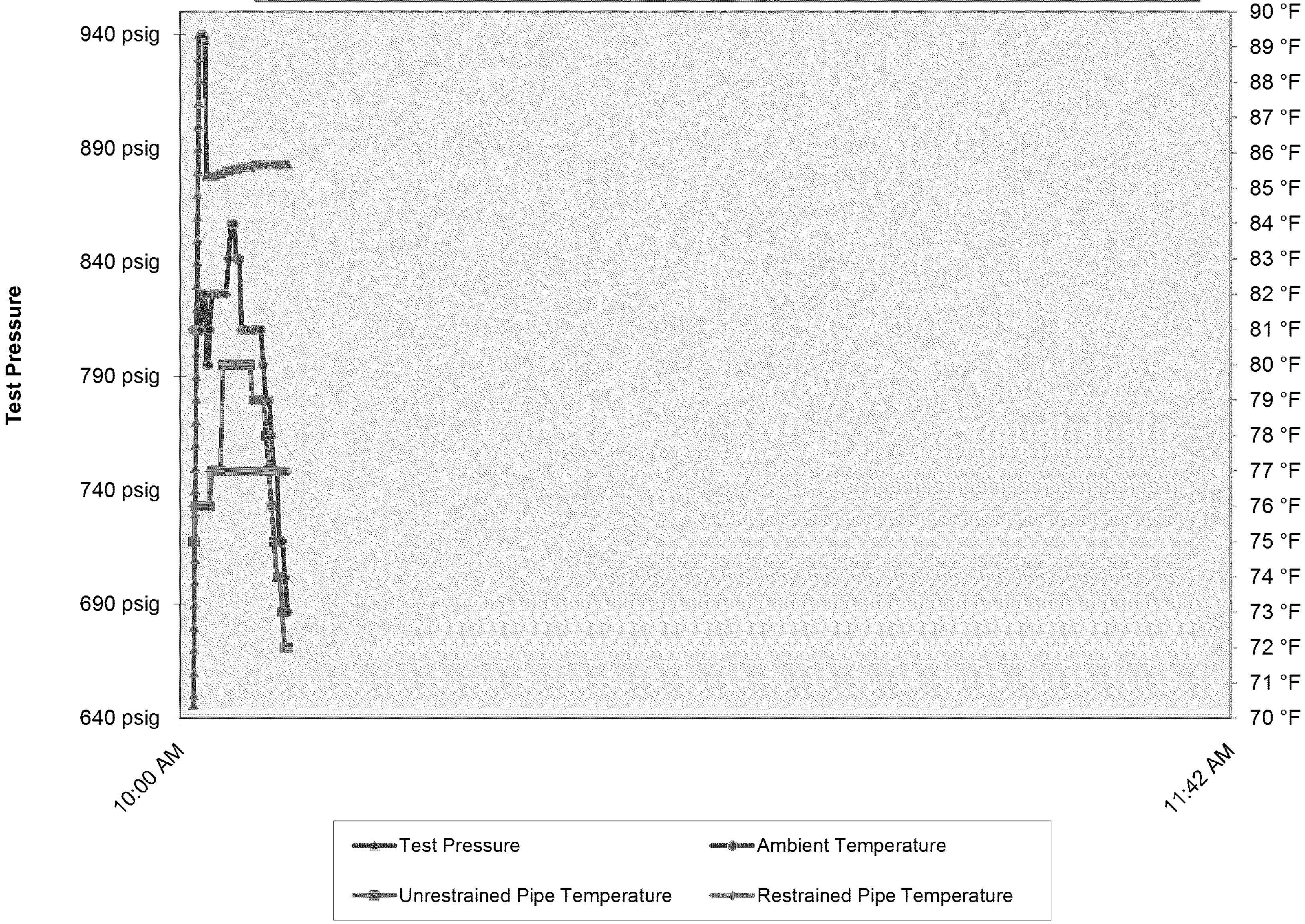
PG&E T-52 Line 300A MP 121.8722 - 122.6788



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Test 52.xlsm
PlotT

7/12/2011

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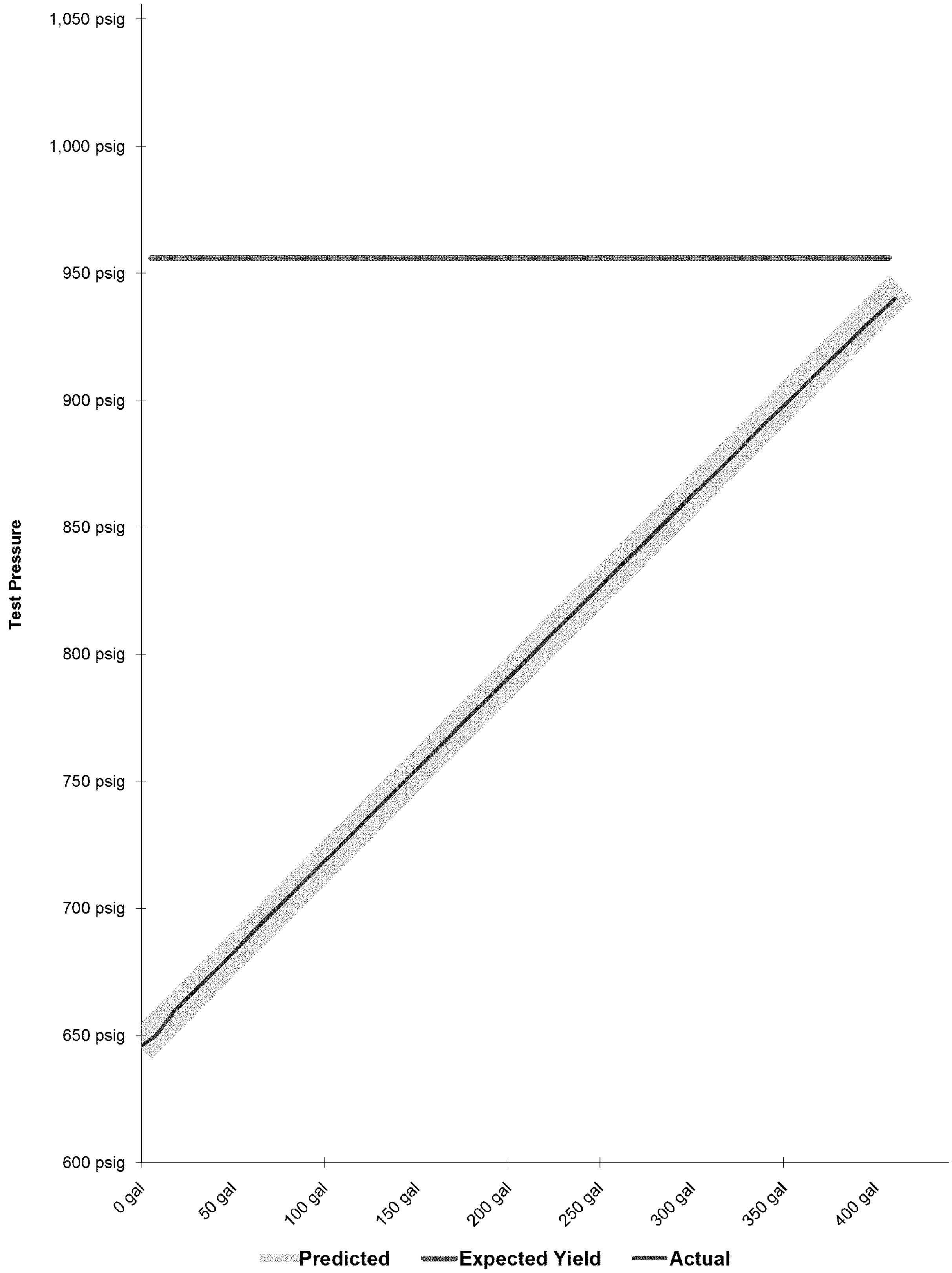
Spike Pressure Test
Stress Strain Curve -- PG&E T-52 Line 300A MP 121.8722 - 122.6788



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Actual Pressure Volume Plot Data			Predicted Pressure Volume Plot Data	Slope	
Pressure	Strokes	Gallons	Gallons	Actual	Predicted
646 psig	0	0.00 gal		0	0.00 gal
650 psig	15	7.85 gal	5.54 gal	1.962	1.385
660 psig	35	18.31 gal	19.39 gal	1.047	1.385
670 psig	62	32.44 gal	33.24 gal	1.413	1.385
680 psig	89	46.57 gal	47.09 gal	1.413	1.385
690 psig	114	59.65 gal	60.94 gal	1.308	1.385
700 psig	141	73.78 gal	74.79 gal	1.413	1.385
710 psig	168	87.91 gal	88.64 gal	1.413	1.385
720 psig	194	101.51 gal	102.50 gal	1.360	1.385
730 psig	221	115.64 gal	116.35 gal	1.413	1.385
740 psig	248	129.77 gal	130.21 gal	1.413	1.386
750 psig	274	143.37 gal	144.06 gal	1.360	1.386
760 psig	301	157.50 gal	157.92 gal	1.413	1.386
770 psig	327	171.11 gal	171.78 gal	1.360	1.386
780 psig	353	184.71 gal	185.64 gal	1.360	1.386
790 psig	380	198.84 gal	199.50 gal	1.413	1.386
800 psig	407	212.97 gal	213.36 gal	1.413	1.386
810 psig	433	226.57 gal	227.22 gal	1.360	1.386
820 psig	460	240.70 gal	241.08 gal	1.413	1.386
830 psig	486	254.30 gal	254.94 gal	1.360	1.386
840 psig	513	268.43 gal	268.81 gal	1.413	1.386
850 psig	540	282.56 gal	282.67 gal	1.413	1.386
860 psig	566	296.17 gal	296.54 gal	1.360	1.387
870 psig	594	310.82 gal	310.40 gal	1.465	1.387
880 psig	621	324.95 gal	324.27 gal	1.413	1.387
890 psig	647	338.55 gal	338.14 gal	1.360	1.387
900 psig	675	353.20 gal	352.01 gal	1.465	1.387
910 psig	702	367.33 gal	365.88 gal	1.413	1.387
920 psig	729	381.46 gal	379.75 gal	1.413	1.387
930 psig	756	395.59 gal	393.62 gal	1.413	1.387
940 psig	785	410.76 gal	407.49 gal	1.517	1.387
940 psig		410.76 gal	407.49 gal	0.000	0.000
940 psig		410.76 gal	407.49 gal	0.000	0.000
940 psig		410.76 gal	407.49 gal	0.000	0.000
940 psig		410.76 gal	407.49 gal	0.000	0.000
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940 psig		410.76 gal	407.49 gal	0.000	0.000
940 psig		410.76 gal	407.49 gal	0.000	0.000
940 psig		410.76 gal	407.49 gal	0.000	0.000

Spike Pressure Test
Stress Strain Curve -- PG&E T-52 Line 300A MP 121.8722 - 122.6788

Pump gal per stroke	0.551 gal/stroke
Pump Piston Diameter	
Pump Piston Stroke	
Pump Cylinders	
Volume check gal per stroke	0.523 gal/stroke
Volume Released (gallons)	4.89 gal
Pressure Reduced (psi)	3.5 psi
Maximum2	440 gal
Minimum2	0 gal
Maximum1	1,056 psig
Minimum1	600 psig
Gallons/Stroke Used	0.523 gal/stroke
Predicted Gallons/Stroke	0.519 gal/stroke
Pressure Increment	10 psi
Max Pressure	940 psig
Buried Pipe Temperature	76 °F
Exposed Pipe Temperature	75 °F

ASME B31.8 Appendix N-5

Average Actual Elastic Slope	1.405
Average Predicted Elastic Slope	1.386
Code Prescribed Minimum Yield Slope (less 10%) B31.8 N-5 (c)(2)	2.669
Established Minimum Yield Pressure B31.8 N-5 (c)(2)	940 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

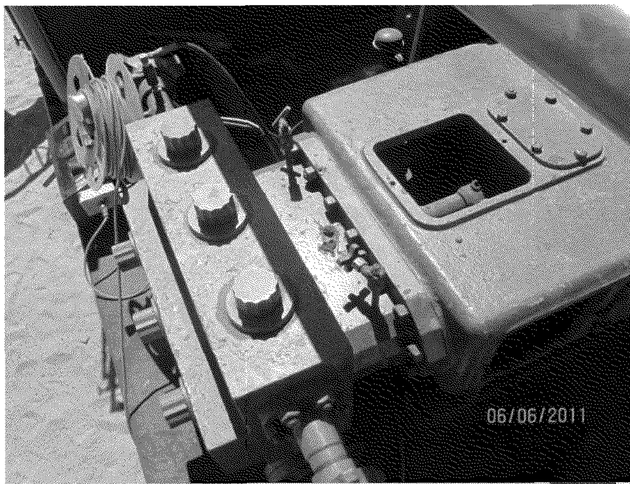
Redacted

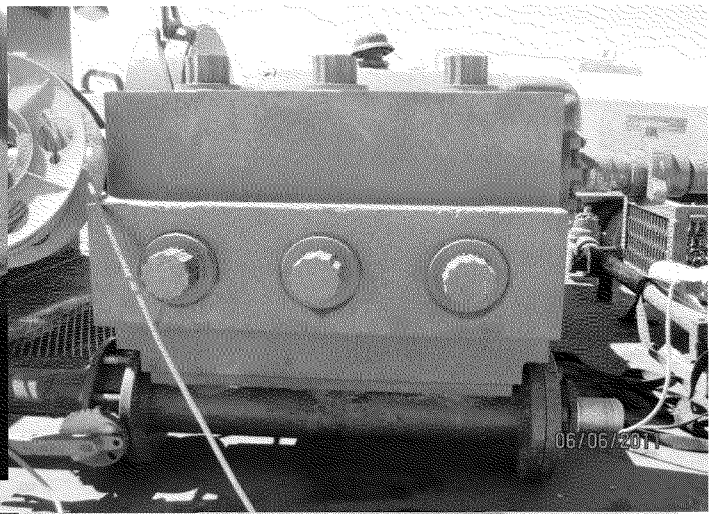
Date

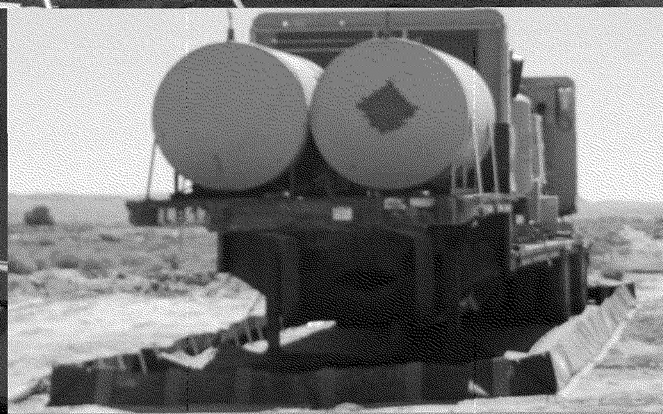
SB_GT&S_0046804

Test Header and Exposed Pipe Segments

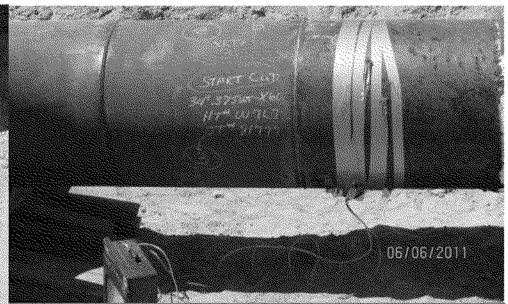
RCP







Test Pressure Pump



Technician Measuring Released Volume

Test Trailer and Instrumentation