RCP, Inc

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

August 28, 2011

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

Test Contractor:	MilBar Hydro-Testing Inc. -- FY12-212
Asset Owner:	Pacific Gas and Electric Company -- 414197332-4
Construction Contractor:	Snelson -- 41497332-4-T-76C
Test Section:	PG&E T-76-4 L-300B, MP 256.66 - 257.5096
Test Date:	August 28, 2011
Certificate Number:	RCP 61362 - T-76-4, L-300B, MP 256.66- 257.5096

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-Testing Inc. met the requirements of the Code of Federal Regulations, Title 49, Part 192, Subpart J (Class 1 - Roads/Facility).

This hydrostatic test was completed successfully. Pressure was maintained on the test facilities in excess of 8.42 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 889 psig and the established MAOP is 808 psig.

Pressure decreased 11 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 1,870.14 ounces, gain, which is equivalent to a 5.22 °F change in pipe temperature and larger than the anticipated 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 inherent error associated with physically attempting to measure the average temperature of 432 feet of buried and 2 feet of exposed pipe from a single point on the line.

Sincerely,

Redacted

cc. file

Hydrostatic Test Certification

Company	Pacific Gas and Electric Company	Job Number	414197332-4
Construction Co.	Snelson	Job Number	41497332-4-T-76C
Hydro. Test Co.	MilBar Hydro-Testing Inc.	Project No.	FY12-212
Test Section	PG&E T-76-4 L-300B, MP 256.66 - 257.5096		
File Name	RCP 61362 - T-76-4, L-300B, MP 256.66- 257.5096		

Hydrostatic Test Pressure

APPLICABLE CODE FOR CERTIFICATION: Test Date: 28-Aug-11

Code of Federal Regulations, Title 49, Part 192, Subpart J (Class 1 - Roads/Facility)

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-76-4 L-300B, MP 256.66 - 257.5096		
From:	0+00	To:	4+03

Pipe Data

Segment	Length	Diameter	Wall Thickness	Specification	100% SMYS
1	2 ft	34.000 in.	0.500 in.	API5L-X65, DSAW, Arc Weld, Steel	1,912 psi
2	403 ft	34.000 in.	0.500 in.	API5L-X52, DSAW, Arc Weld, Steel	1,529 psi
3	8 ft	24.000 in.	0.500 in.	API5L-X52, DSAW, Arc Weld, Steel	2,167 psi
4	21 ft	2.375 in.	0.218 in.	API5L-Grade B, SM, Arc Weld, Steel	6,425 psi

Initial Test Conditions

Pressure at Test Point:	900 psig	Date/Time:	8/28/11 7:50 AM	Pipe Temperature Unrestrained:	103.0 °F
Ambient Temperature:	92.0 °F			Restrained:	96.0 °F
		Elevation @ Test Point:	509.0 ft	Location:	0+00
Pressure @ High Point (Cal/Measure):	900 psig	Elevation @ High Point:	509.0 ft	Location:	0+00
Pressure @ Low Point (Cal/Measure):	909 psig	Elevation @ Low Point:	489.0 ft	Location:	1+00

Final Test Conditions

Pressure at Test Point:	889 psig	Date/Time:	8/28/11 4:15 PM	Pipe Temperature Unrestrained:	109.0 °F
Ambient Temperature:	108.0 °F			Restrained:	91.0 °F
		Elevation @ Test Point:	509.0 ft	Location:	0+00
Pressure @ High Point (Cal/Measure):	889 psig	Elevation @ High Point:	509.0 ft	Location:	0+00
Pressure @ Low Point (Cal/Measure):	898 psig	Elevation @ Low Point:	489.0 ft	Location:	1+00
	Total Fluid Injected:			Volume gain	
	Total Fluid Withdrawn:				
Net Change in Volume of the Test Section ± (+ Gain, - Loss):		1,870.14 oz	gain	0.0804%	5.220 °F equivalent

Test Duration: 8.42 hours

Minimum Test Pressure:	Test Point	887 psig	Max Elevation	887 psig	Min Elevation	896 psig
Maximum Test Pressure:		900 psig		900 psig		909 psig
% SMYS :				47.1%		59.4%
Test Segment Observed % SMYS :			Minimum	14.1%	Maximum	59.4%

Minimum Test Pressure (Calculated/Measured):			889 psig
Maximum Allowable Operating Pressure:	DOT Part 192	Test Factor= 1.10	808 psig

Were leaks observed?	No	Explain:
Acceptable Hydrostatic Test?	Yes	No leaks were observed during the test period. The test section included 432 feet of buried and 2 feet of exposed pipe. Pressure lost 11 psi during the test. The buried pipe segment lost 5°F fluid temperature and the exposed pipe segment gained 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 1,870.14 ounces, gain, which is equivalent to a 5.22 °F change in pipe temperature and larger than the anticipated 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 inherent error associated with physically attempting to measure the average temperature of 432 feet of buried and 2 feet of exposed pipe from a single point on the line.
Remarks	This test includes 20' of .840 dia., .147 wall thickness, API 5L, GR B, SMLS pipe.	

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28-Aug-11

RCP

Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	414197332-4
Construction Co.	Snelson	Job Number	41497332-4-T-76C
Testing Co.	MilBar Hydro-Testing Inc.	Project No.	FY12-212
Test Section	PG&E T-76-4 L-300B, MP 256.66 - 257.5096		
File Name	RCP 61362 - T-76-4, L-300B, MP 256.66- 257.5096		

Date **28-Aug-11**

Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe				
					Unrestrained	Restrained	Comment	Bleed	Inject
1	8/28/11	7:10 AM	656 psig	92 °F	103 °F	97 °F			
2	8/28/11	7:12 AM	666 psig	92 °F	103 °F	97 °F	Inject		141 oz.
3	8/28/11	7:14 AM	676 psig	92 °F	103 °F	97 °F	Inject		147 oz.
4	8/28/11	7:16 AM	686 psig	92 °F	103 °F	97 °F	Inject		135 oz.
5	8/28/11	7:18 AM	696 psig	92 °F	103 °F	97 °F	Inject		147 oz.
6	8/28/11	7:20 AM	706 psig	92 °F	103 °F	97 °F	Inject		141 oz.
7	8/28/11	7:22 AM	716 psig	92 °F	103 °F	97 °F	Inject		147 oz.
8	8/28/11	7:24 AM	726 psig	92 °F	103 °F	97 °F	Inject		147 oz.
9	8/28/11	7:26 AM	736 psig	92 °F	103 °F	97 °F	Inject		135 oz.
10	8/28/11	7:28 AM	746 psig	92 °F	103 °F	97 °F	Inject		147 oz.
11	8/28/11	7:30 AM	756 psig	92 °F	103 °F	97 °F	Inject		147 oz.
12	8/28/11	7:32 AM	766 psig	92 °F	103 °F	97 °F	Inject		141 oz.
13	8/28/11	7:34 AM	776 psig	92 °F	103 °F	97 °F	Inject		141 oz.
14	8/28/11	7:36 AM	786 psig	92 °F	103 °F	97 °F	Inject		141 oz.
15	8/28/11	7:38 AM	796 psig	92 °F	103 °F	97 °F	Inject		147 oz.
16	8/28/11	7:39 AM	806 psig	92 °F	103 °F	97 °F	Inject		135 oz.
17	8/28/11	7:40 AM	816 psig	92 °F	103 °F	97 °F	Inject		141 oz.
18	8/28/11	7:41 AM	826 psig	92 °F	103 °F	97 °F	Inject		135 oz.
19	8/28/11	7:42 AM	836 psig	92 °F	103 °F	97 °F	Inject		141 oz.
20	8/28/11	7:43 AM	846 psig	92 °F	103 °F	97 °F	Inject		130 oz.
21	8/28/11	7:44 AM	856 psig	92 °F	103 °F	97 °F	Inject		147 oz.
22	8/28/11	7:45 AM	866 psig	92 °F	103 °F	96 °F	Inject		141 oz.
23	8/28/11	7:46 AM	876 psig	92 °F	103 °F	96 °F	Inject		130 oz.
24	8/28/11	7:47 AM	886 psig	92 °F	103 °F	96 °F	Inject		135 oz.
25	8/28/11	7:48 AM	896 psig	92 °F	103 °F	96 °F	Inject		135 oz.
26	8/28/11	7:49 AM	900 psig	92 °F	103 °F	96 °F			62 oz.
27	8/28/11	7:50 AM	900 psig	92 °F	103 °F	96 °F	On Test		
28	8/28/11	8:00 AM	900 psig	92 °F	103 °F	94 °F			
29	8/28/11	8:15 AM	900 psig	95 °F	104 °F	92 °F	Cloud Cover		
30	8/28/11	8:30 AM	898 psig	96 °F	104 °F	94 °F			
31	8/28/11	8:45 AM	898 psig	96 °F	105 °F	94 °F			
32	8/28/11	9:00 AM	897 psig	95 °F	105 °F	94 °F	Cloud Cover		
33	8/28/11	9:15 AM	896 psig	94 °F	105 °F	94 °F			
34	8/28/11	9:30 AM	896 psig	94 °F	105 °F	94 °F			
35	8/28/11	9:45 AM	896 psig	96 °F	105 °F	94 °F	Cloud Cover		
36	8/28/11	10:00 AM	895 psig	97 °F	105 °F	94 °F			
37	8/28/11	10:15 AM	895 psig	97 °F	105 °F	94 °F			
38	8/28/11	10:30 AM	894 psig	95 °F	105 °F	94 °F			
39	8/28/11	10:45 AM	893 psig	95 °F	105 °F	94 °F			
40	8/28/11	11:00 AM	893 psig	96 °F	105 °F	94 °F			
41	8/28/11	11:15 AM	892 psig	96 °F	105 °F	94 °F			
42	8/28/11	11:30 AM	892 psig	96 °F	105 °F	94 °F			
43	8/28/11	11:45 AM	892 psig	96 °F	105 °F	94 °F			

Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	414197332-4
Construction Co.	Snelson	Job Number	41497332-4-T-76C
Testing Co.	MilBar Hydro-Testing Inc.	Project No.	FY12-212
Test Section	PG&E T-76-4 L-300B, MP 256.66 - 257.5096		
File Name	RCP 61362 - T-76-4, L-300B, MP 256.66- 257.5096		

Date **28-Aug-11**

Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe				
					Unrestrained	Restrained	**Comment**	**Bleed**	**Inject**
44	8/28/11	12:00 PM	891 psig	98 °F	105 °F	94 °F			
45	8/28/11	12:15 PM	891 psig	98 °F	106 °F	93 °F			
46	8/28/11	12:30 PM	891 psig	99 °F	106 °F	93 °F			
47	8/28/11	12:45 PM	890 psig	99 °F	106 °F	94 °F			
48	8/28/11	1:00 PM	889 psig	100 °F	106 °F	94 °F			
49	8/28/11	1:15 PM	889 psig	99 °F	106 °F	94 °F	Cloud Cover		
50	8/28/11	1:30 PM	888 psig	99 °F	106 °F	94 °F			
51	8/28/11	1:45 PM	888 psig	99 °F	105 °F	95 °F			
52	8/28/11	2:00 PM	888 psig	99 °F	105 °F	95 °F			
53	8/28/11	2:15 PM	887 psig	100 °F	105 °F	94 °F			
54	8/28/11	2:30 PM	888 psig	100 °F	106 °F	94 °F			
55	8/28/11	2:45 PM	888 psig	101 °F	106 °F	93 °F			
56	8/28/11	3:00 PM	888 psig	102 °F	106 °F	91 °F			
57	8/28/11	3:15 PM	888 psig	105 °F	107 °F	90 °F			
58	8/28/11	3:30 PM	888 psig	106 °F	108 °F	90 °F			
59	8/28/11	3:45 PM	888 psig	107 °F	108 °F	90 °F			
60	8/28/11	4:00 PM	889 psig	107 °F	108 °F	90 °F			
61	8/28/11	4:15 PM	889 psig	108 °F	109 °F	91 °F	End of Test		
							Spike Test		
							Hydrostatic Test		

Were leaks observed during the test period?	Exposed and buried pipe, no leaks observed.	High Test Pressure:	900 psig
		Low Test Pressure:	887 psig

Pipe Segment Volume Calculations

Company	Pacific Gas and Electric Company	Job Number	414197332-4
Construction Co.	Snelson	Job Number	41497332-4-T-76C
Hydro. Test Co.	MilBar Hydro-Testing Inc.	Project No.	FY12-212
Test Section	PG&E T-76-4 L-300B, MP 256.66 - 257.5096	WATER	
File Name	RCP 61362 - T-76-4, L-300B, MP 256.66- 257.5096		

General Pipe Data

Description	Segment										
	1	2	3	4							
Restrained or Unrestrained?	Unrestrained	Restrained	Restrained	Restrained							
Outside Diameter	34.000 in.	34.000 in.	24.000 in.	2.375 in.							
Wall Thickness	0.500 in.	0.500 in.	0.500 in.	0.218 in.							
Inside Diameter	33.000 in.	33.000 in.	23.000 in.	1.939 in.							
Spec./Grade	API5L-X65	API5L-X52	API5L-X52	API5L-Grade B							
Length Unrestrained	2 ft										
Length Restrained		403 ft	8 ft	21 ft							
Temperature -- On Test	103 °F	96 °F	96.0 °F	96.0 °F							
Temperature -- End of Test	109 °F	91 °F	91.0 °F	91.0 °F							
Pressure -- On Test	900 psig	900 psig	900 psig	900 psig							
Pressure -- End of Test	889 psig	889 psig	889 psig	889 psig							

Unrestrained Pipe

Sum:	Vo	88.86 gal 11,374 oz.		Vtp1	88.81 gal 11,368 oz.		Vtp2		88.67 gal 11,350 oz.		
Vo Unrestrained	89 gal										
Fwp 1	1.002757										
Fpp 1	1.002475										
Fpt 1	1.000783										
Fwt 1	1.006611										
Fpwt 1 = Fpt/Fwt	0.994210										
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	88.81 gal										
Fwp 2	1.002723										
Fpp 2	1.002445										
Fpt 2	1.000892										
Fwt 2	1.008254										
Fpwt = Fpt/Fwt	0.992698										
Vtp = Vo(Fwp)(Fpp)(Fpwt)	88.67 gal										

Restrained Pipe

Sum:	Vo	18,081.62 gal 2,314,447 oz.		Vtp1	18,080.03 gal 2,314,244 oz.		Vtp2		18,094.78 gal 2,316,132 oz.		
Vo Unrestrained		17,906 gal	173 gal	3 gal							
Fwp 1		1.002757	1.002757	1.002757							
Fpp 1		1.001931	1.001385	1.000372							
Fpt 1		1.000436	1.000436	1.000436							
Fwt 1		1.005214	1.005214	1.005214							
Fpwt 1 = Fpt/Fwt		0.995246	0.995246	0.995246							
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		17,904 gal	173 gal	3 gal							
Fwp 2		1.002723	1.002723	1.002723							
Fpp 2		1.001891	1.001352	1.000351							
Fpt 2		1.000375	1.000375	1.000375							
Fwt 2		1.004260	1.004260	1.004260							
Fpwt = Fpt/Fwt		0.996131	0.996131	0.996131							
Vtp = Vo(Fwp)(Fpp)(Fpwt)		17,919 gal	173 gal	3 gal							

Combined Pipe

Sum:	Vo	18,170.48 gal 2,325,821 oz.	Vtp1	18,168.84 gal 2,325,612 oz.	Vtp2	18,183.45 gal 2,327,482 oz.

Pipe Segment Volume Allowance Calculations

Company	Pacific Gas and Electric Company	Job Number	414197332-4
Construction Co.	Snelson	Job Number	41497332-4-T-76C
Hydro. Test Co.	MilBar Hydro-Testing Inc.	Project No.	FY12-212
Test Section	PG&E T-76-4 L-300B, MP 256.66 - 257.5096		WATER
File Name	RCP 61362 - T-76-4, L-300B, MP 256.66- 257.5096		

General Pipe Data

Description	Segment 1	2	3	4
Restrained or Unrestrained?	Unrestrained	Restrained	Restrained	Restrained
Outside Diameter	34.000 in.	34.000 in.	24.000 in.	2.375 in.
Wall Thickness	0.500 in.	0.500 in.	0.500 in.	0.218 in.
Inside Diameter	33.000 in.	33.000 in.	23.000 in.	1.939 in.
Spec./Grade	API5L-X65	API5L-X52	API5L-X52	API5L-Grade B
Length Unstrained	2.00 ft			
Length Restrained		403 ft	8 ft	21 ft
Temperature – On Test	105 °F	93 °F	93 °F	93 °F
Temperature – End of Test	106 °F	94 °F	94 °F	94 °F
Pressure – On Test	894 psig	894 psig	894 psig	894 psig
Pressure – End of Test	894 psig	894 psig	894 psig	894 psig

Unrestrained Pipe

Sum:	Vo	88.86 gal / 11,374 oz.	Vtp1	88.75 gal / 11,360 oz.	Vtp2	88.73 gal / 11,358 oz.
Vo Unrestrained	89 gal					
Fwp 1	1.002739					
Fpp 1	1.002459					
Fpt 1	1.000819					
Fwt 1	1.007256					
Fpwt 1 = Fpt/Fwt	0.993609					
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	88.75 gal					
Fwp 2	1.002739					
Fpp 2	1.002459					
Fpt 2	1.000837					
Fwt 2	1.007506					
Fpwt = Fpt/Fwt	0.993381					
Vtp = Vo(Fwp)(Fpp)(Fpwt)	88.73 gal					

Restrained Pipe

Sum:	Vo	18,081.62 gal / 2,314,447 oz.		Vtp1	18,089.20 gal / 2,315,417 oz.	Vtp2	18,086.42 gal / 2,315,061 oz.
Vo Restrained		17,906 gal	173 gal	3 gal			
Fwp 1		1.002739	1.002739	1.002739			
Fpp 1		1.001909	1.001366	1.000360			
Fpt 1		1.000399	1.000399	1.000399			
Fwt 1		1.004627	1.004627	1.004627			
Fpwt 1 = Fpt/Fwt		0.995792	0.995792	0.995792			
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		17,913 gal	173 gal	3 gal			
Fwp 2		1.002739	1.002739	1.002739			
Fpp 2		1.001912	1.001370	1.000364			
Fpt 2		1.000411	1.000411	1.000411			
Fwt 2		1.004797	1.004797	1.004797			
Fpwt = Fpt/Fwt		0.995635	0.995635	0.995635			
Vtp = Vo(Fwp)(Fpp)(Fpwt)		17,911 gal	173 gal	3 gal			

Combined Pipe

Sum:	Vo	18,170.48 gal / 2,325,821 oz.	Vtp1	18,177.95 gal / 2,326,778 oz.	Vtp2	18,175.15 gal / 2,326,419 oz.
1 °F Change	2.80 gal	358.26 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	2 ft	Unrestrained	34.000 in.	0.5000 in.	API5L-X65	1,912 psig	Steel	Arc Weld	DSAW
2	403 ft	Restrained	34.000 in.	0.5000 in.	API5L-X52	1,529 psig	Steel	Arc Weld	DSAW
3	8 ft	Restrained	24.000 in.	0.5000 in.	API5L-X52	2,167 psig	Steel	Arc Weld	DSAW
4	21 ft	Restrained	2.375 in.	0.2180 in.	API5L-Grade B	6,425 psig	Steel	Arc Weld	SM

Hydrostatic Test Project Owner & Participants

Owner Company	Pacific Gas and Electric Company	Job Number
Address	350 N. Wiget	414197332-4
	Walnut Creek, CA 94598	
	Attention: Redacted	
Construction Company	Snelson	Job Number
Address	601 State Street	41497332-4-T-76C
	Sedro-Valley, WA 98284	
	Attention: J. Elliot	
Hydrostatic Test Co.	MilBar Hydro-Testing Inc.	Project No.
Address	P.O. Box 7701	FY12-212
	Shreveport, LA 71137-7701	
	Attention:	
Test Section	PG&E T-76-4 L-300B, MP 256.66 - 257.5096	
	From: 0+00	
	To: 4+03	
File Name	RCP 61362 - T-76-4, L-300B, MP 256.66- 257.5096	

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	8/28/11 7:50 AM	Elevation at Test Point	509 ft	Min. Required Test Press At Test Point (1)	875.00 psig	Max. Allowable Test Press at Test Point (4)	999.33 psig
Time and Date Test Ended	8/28/11 4:15 PM	Max. Elevation in Test Section	509 ft	Min. Indicated Test Pressure (2)	887.00 psig	Max. Indicated Test Pressure (5)	900.00 psig
Actual Duration of Test	8 hours 25 minutes	Min. Elevation in Test Section	489 ft	Min. Test Pressure at Max. Elevation (3)	887.00 psig	Max. Test Pressure at Min. Elevation (6)	908.67 psig

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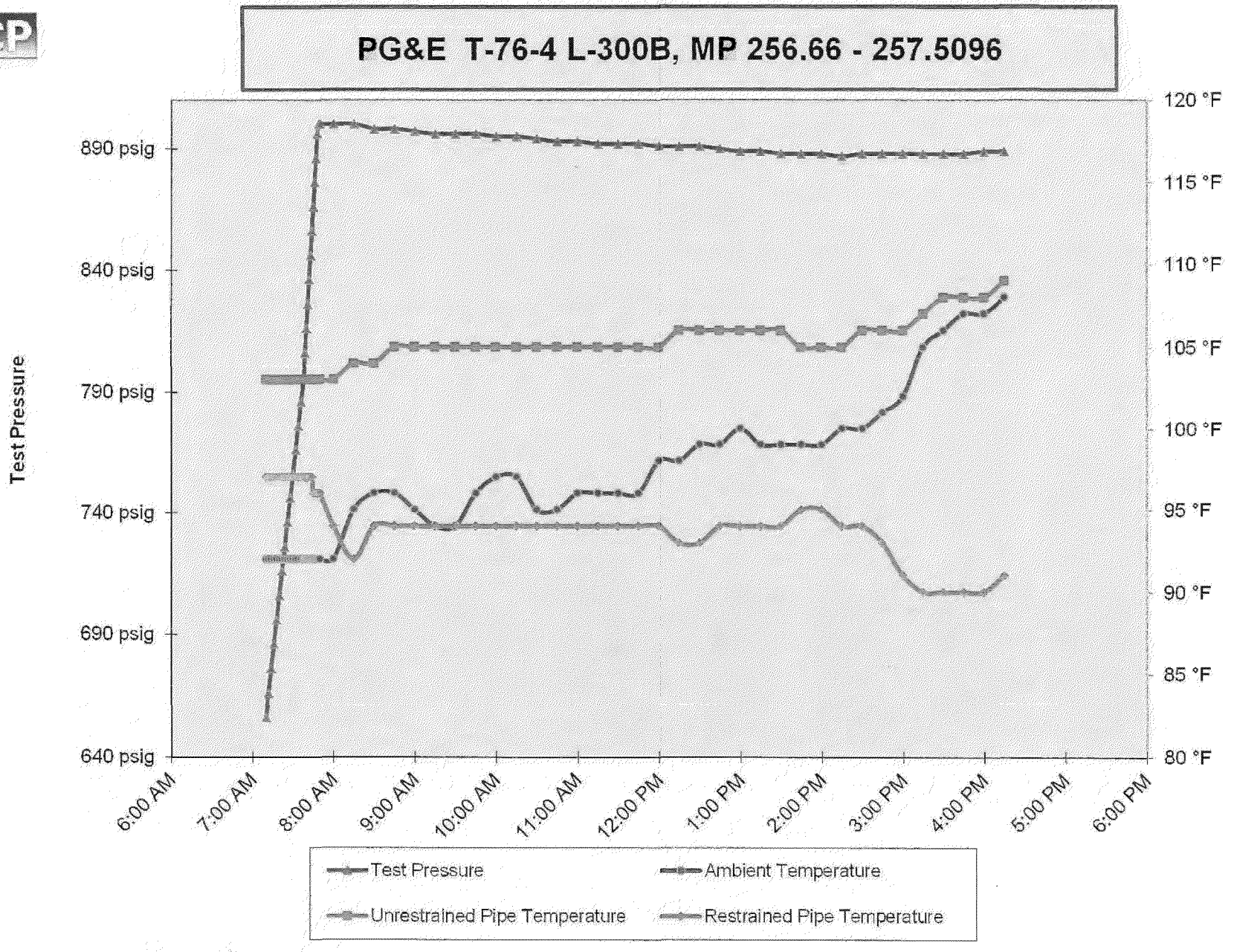
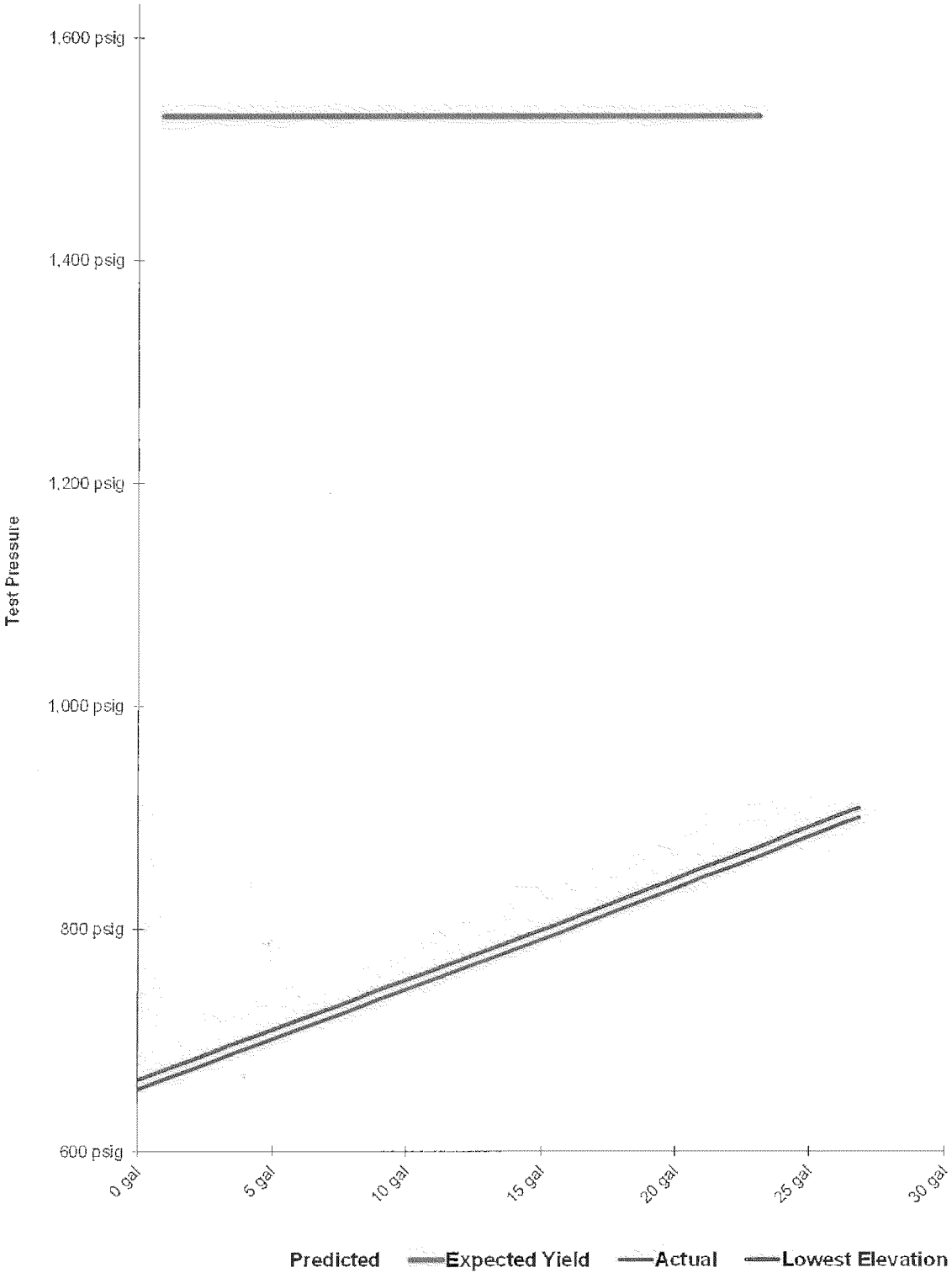

PG&E T-76-4 L-300B, MP 256.66 - 257.5096
Test Pressure
890 psig
840 psig
790 psig
740 psig
690 psig
640 psig
120 °F
115 °F
110 °F
105 °F
100 °F
95 °F
90 °F
85 °F
80 °F
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
Test Pressure
Ambient Temperature
Unrestrained Pipe Temperature
Restrained Pipe Temperature

Spike Pressure Test
Stress Strain Curve -- PG&E T-76-4 L-300B, MP 256.66 - 257.5096



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Actual Pressure Volume Plot Data			Predicted Pressure Volume Plot Data	Slope	
Pressure	Strokes	Gallons	Gallons	Actual	Predicted
656 psig	0	0.00 gal		0	0.000
666 psig	25	1.10 gal	0.95 gal	0.110	0.095
676 psig	51	2.25 gal	1.89 gal	0.115	0.095
686 psig	75	3.31 gal	2.84 gal	0.106	0.095
696 psig	101	4.45 gal	3.78 gal	0.115	0.095
706 psig	126	5.55 gal	4.73 gal	0.110	0.095
716 psig	152	6.70 gal	5.67 gal	0.115	0.095
726 psig	178	7.84 gal	6.62 gal	0.115	0.095
736 psig	202	8.90 gal	7.56 gal	0.106	0.095
746 psig	228	10.05 gal	8.51 gal	0.115	0.095
756 psig	254	11.19 gal	9.46 gal	0.115	0.095
766 psig	279	12.30 gal	10.40 gal	0.110	0.095
776 psig	304	13.40 gal	11.35 gal	0.110	0.095
786 psig	329	14.50 gal	12.29 gal	0.110	0.095
796 psig	355	15.65 gal	13.24 gal	0.115	0.095
806 psig	379	16.70 gal	14.19 gal	0.106	0.095
816 psig	404	17.81 gal	15.13 gal	0.110	0.095
826 psig	428	18.86 gal	16.08 gal	0.106	0.095
836 psig	453	19.96 gal	17.02 gal	0.110	0.095
846 psig	476	20.98 gal	17.97 gal	0.101	0.095
856 psig	502	22.12 gal	18.92 gal	0.115	0.095
866 psig	527	23.23 gal	19.86 gal	0.110	0.095
876 psig	550	24.24 gal	20.81 gal	0.101	0.095
886 psig	574	25.30 gal	21.76 gal	0.106	0.095
896 psig	598	26.36 gal	22.70 gal	0.106	0.095
900 psig	609	26.84 gal	23.08 gal	0.121	0.095
900 psig		26.84 gal	23.08 gal	0.000	0.000
900 psig		26.84 gal	23.08 gal	0.000	0.000
900 psig		26.84 gal	23.08 gal	0.000	0.000
900 psig		26.84 gal	23.08 gal	0.000	0.000
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900 psig		26.84 gal	23.08 gal	0.000	0.000
900 psig		26.84 gal	23.08 gal	0.000	0.000

Spike Pressure Test
Stress Strain Curve -- PG&E T-76-4 L-300B, MP 256.66 - 257.5096

Pump gal per stroke	0.138 gal/stroke
Pump Piston Diameter	1.500 in
Pump Piston Stroke	6.00 in
Pump Cylinders	3 ea
Volume check gal per stroke	0.044 gal/stroke
Volume Released (gallons)	1.10 gal
Pressure Reduced (psi)	10 psi
Maximum2	30 gal
Minimum2	0 gal
Maximum1	1,630 psig
Minimum1	600 psig
Gallons/Stroke Used	0.044 gal/stroke
Predicted Gallons/Stroke	0.038 gal/stroke
Pressure Increment	10 psi
Max Pressure	900 psig
Buried Pipe Temperature	100 °F
Exposed Pipe Temperature	95 °F

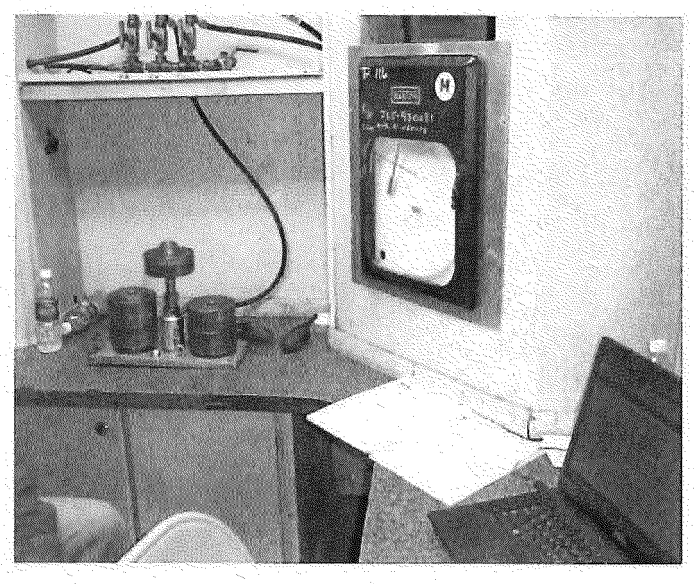
ASME B31.8 Appendix N-5

Average Actual Elastic Slope	0.110
Average Predicted Elastic Slope	0.095
Code Prescribed Minimum Yield Slope (less 10%) B31.8 N-5 (c)(2)	0.210
Established Minimum Yield Pressure B31.8 N-5 (c)(2)	900 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

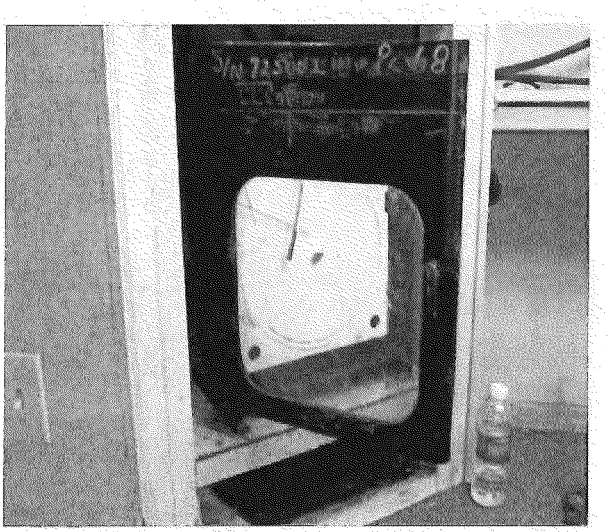
Redacted

8/28/4
Date

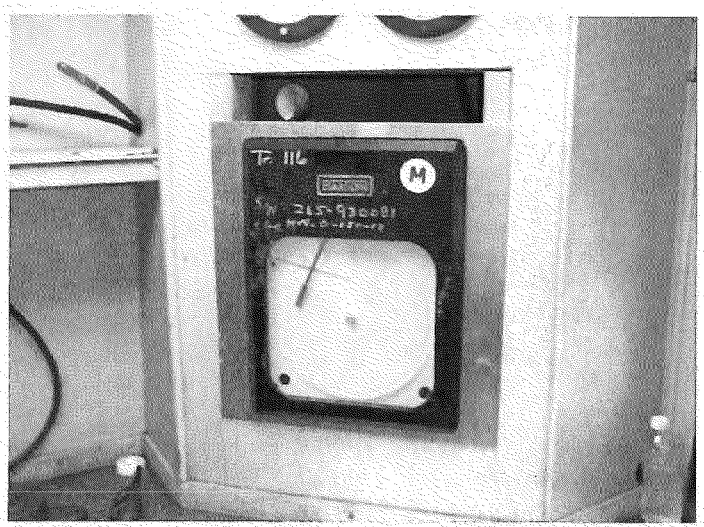
Pressue Pump and Test Trailer



Deadweight Testing Equipment

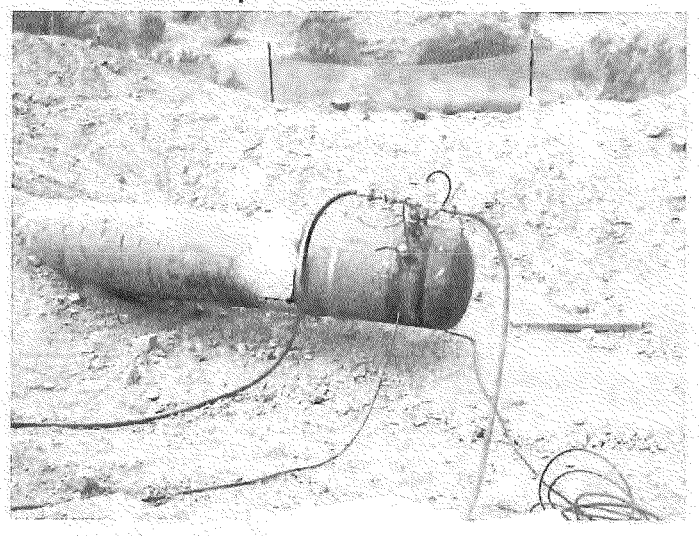


Pressure Chart Recorder



Ambient Temp. Chart Recorder

Restrained Temp Char Recorder



Test Location B

RCP

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