



RCP, Inc

801 Louisiana, Ste.200
Houston, Texas 77002
713.265.8000

Redacted

October 23, 2011

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

Test Contractor:	AKRI – T-24 10/23/11
Asset Owner:	Pacific Gas and Electric Company – 41497359
Construction Contractor:	ARB – 0629-53-3500 T-24
Test Section:	PG&E T-24 , L-132 , MP 0.945 - 1.88
Test Date:	October 23, 2011
Certificate Number:	RCP 61362 - T-24, L-132, MP 0.945 - 1.88

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 751 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 8.25 hour test duration period.

This hydrostatic test was completed successfully. Pressure was maintained on the test facilities in excess of 8.25 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 705 psig and the MAOP per 49 CFR Part 192, Subpart J can be as high as 470 psig. The MAOP established by this test is sufficient to qualify for Pacific Gas and Electric Company's desired MAOP of 400 psig.

Pressure decreased 43 psi during the test. 5,856.00 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 410.36 ounces, gain, which is equivalent to a 0.57 °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,

Redacted

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Test 24a
Letter



Hydrostatic Test Certification

Company	Pacific Gas and Electric Company	Job Number	41497359
Construction Co.	ARB	Job Number	0629-53-3500 T-24
Hydro Test Co.	AKRI	Project No.	T-24 10/23/11
Test Section	PG&E T-24, L-132, MP 0.945 - 1.88		
File Name	RCP 61362 - T-24, L-132, MP 0.945 - 1.88		

Hydrostatic Test Pressure

APPLICABLE CODE FOR CERTIFICATION: _____ Test Date: 23-Oct-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-24, L-132, MP 0.945 - 1.88
 From: 51+07 To: 0+00

Pipe Data

Segment	Length	Diameter	Wall Thickness	Specification	100% SMYS
1	50 ft	24.000 in.	0.375 in.	API5L-X60, DSAW, Arc Weld, Steel	1,875 psi
2	4,937 ft	24.000 in.	0.281 in.	40ksmys, CTH, Arc Weld, Steel	937 psi
3	17 ft	24.000 in.	0.313 in.	API5L-X60, DSAW, Arc Weld, Steel	1,583 psi
4	112 ft	24.000 in.	0.313 in.	API5L-X52, DSAW, Arc Weld, Steel	1,354 psi
5	49 ft	24.000 in.	0.344 in.	API5L-X42, DSAW, Arc Weld, Steel	1,204 psi
6	22 ft	24.000 in.	0.500 in.	API5L-X65, DSAW, Arc Weld, Steel	2,708 psi

Initial Test Conditions

Pressure at Test Point:	751 psig	Date/Time:	10/23/11 8:00 AM	Pipe Temperature	
Ambient Temperature:	53.0 °F	Elevation @ Test Point:	14.0 ft	Unrestrained:	58.0 °F
Pressure @ High Point (Cal/Measure):	748 psig	Elevation @ High Point:	22.0 ft	Restrained:	55.0 °F
Pressure @ Low Point (Cal/Measure):	751 psig	Elevation @ Low Point:	14.0 ft	Location:	51+07
				Location:	0+00
				Location:	51+07

Final Test Conditions

Pressure at Test Point:	708 psig	Date/Time:	10/23/11 4:15 PM	Pipe Temperature	
Ambient Temperature:	79.0 °F	Elevation @ Test Point:	14.0 ft	Unrestrained:	70.0 °F
Pressure @ High Point (Cal/Measure):	705 psig	Elevation @ High Point:	22.0 ft	Restrained:	57.0 °F
Pressure @ Low Point (Cal/Measure):	708 psig	Elevation @ Low Point:	14.0 ft	Location:	51+07
				Location:	0+00
				Location:	51+07

Total Fluid Injected:

Total Fluid Withdrawn: 5856.00 fluid ounces

Volume gain

Net Change in Volume of the Test Section ± (+ Gain, - Loss): 410.36 oz gain 0.0027% 0.565 °F equivalent

Test Duration: 8.25 hours

Minimum Test Pressure:	700 psig	Max Elevation	697 psig	Min Elevation	700 psig
Maximum Test Pressure:	751 psig		748 psig		751 psig
% SMYS:			47.8%		80.2%
Test Segment Observed % SMYS:		Minimum	27.7%	Maximum	80.2%

Minimum Test Pressure (Calculated/Measured): 705 psig

Maximum Allowable Operating Pressure: DOT Part 192 Test Factor= 1.50 470 psig

The MAOP established by this test is sufficient to qualify for Pacific Gas and Electric Company's desired MAOP of 400 psig.

Were leaks observed?	No	Explain:
Acceptable Hydrostatic Test?	Yes	<p>The test segment was subjected to a spike pressure test of 751 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 8.25 hour test duration period.</p> <p>No leaks were observed during the test period. The test section included 5,115 feet of buried and 72 feet of exposed pipe. Pressure lost 43 psi during the test. The buried pipe segment gained 2°F fluid temperature and the exposed pipe segment gained 12°F.</p> <p>5,856.00 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 410.36 ounces, gain, which is equivalent to a 0.57 °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 gain is attributed to the error characteristic of the temperature measurement instrumentation utilized.</p>

Remarks

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23-Oct-11



Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41497359
Construction Co.	ARB	Job Number	0629-53-3500 T-24
Testing Co.	AKRI	Project No.	T-24 10/23/11
Test Section	PG&E T-24, L-132, MP 0.945 - 1.88		
File Name	RCP 61362 - T-24, L-132, MP 0.945 - 1.88		

Date	23-Oct-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	10/23/11	7:36 AM	512 psig	52 °F	58 °F	55 °F	Start Spike		
2	10/23/11	7:36 AM	522 psig	52 °F	58 °F	55 °F	Inject		952 oz.
3	10/23/11	7:37 AM	532 psig	52 °F	58 °F	55 °F	Inject		971 oz.
4	10/23/11	7:38 AM	542 psig	52 °F	58 °F	55 °F	Inject		1,045 oz.
5	10/23/11	7:39 AM	552 psig	52 °F	58 °F	55 °F	Inject		803 oz.
6	10/23/11	7:40 AM	562 psig	52 °F	58 °F	55 °F	Inject		915 oz.
7	10/23/11	7:41 AM	572 psig	52 °F	58 °F	55 °F	Inject		1,008 oz.
8	10/23/11	7:42 AM	582 psig	52 °F	58 °F	55 °F	Inject		952 oz.
9	10/23/11	7:43 AM	592 psig	52 °F	58 °F	55 °F	Inject		933 oz.
10	10/23/11	7:44 AM	602 psig	52 °F	58 °F	55 °F	Inject		1,008 oz.
11	10/23/11	7:45 AM	612 psig	52 °F	58 °F	55 °F	Inject		896 oz.
12	10/23/11	7:46 AM	622 psig	52 °F	58 °F	55 °F	Inject		915 oz.
13	10/23/11	7:47 AM	632 psig	52 °F	58 °F	55 °F	Inject		989 oz.
14	10/23/11	7:48 AM	642 psig	52 °F	58 °F	55 °F	Inject		915 oz.
15	10/23/11	7:49 AM	652 psig	52 °F	58 °F	55 °F	Inject		1,027 oz.
16	10/23/11	7:50 AM	662 psig	52 °F	58 °F	55 °F	Inject		952 oz.
17	10/23/11	7:51 AM	672 psig	52 °F	58 °F	55 °F	Inject		933 oz.
18	10/23/11	7:52 AM	682 psig	52 °F	58 °F	55 °F	Inject		1,027 oz.
19	10/23/11	7:53 AM	692 psig	52 °F	58 °F	55 °F	Inject		877 oz.
20	10/23/11	7:54 AM	702 psig	52 °F	58 °F	55 °F	Inject		989 oz.
21	10/23/11	7:55 AM	712 psig	52 °F	58 °F	55 °F	Inject		1,008 oz.
22	10/23/11	7:56 AM	722 psig	53 °F	58 °F	55 °F	Inject		933 oz.
23	10/23/11	7:57 AM	732 psig	53 °F	58 °F	55 °F	Inject		933 oz.
24	10/23/11	7:58 AM	742 psig	53 °F	58 °F	55 °F	Inject		1,027 oz.
25	10/23/11	7:59 AM	751 psig	53 °F	58 °F	55 °F	Inject		933 oz.
26	10/23/11	8:00 AM	751 psig	53 °F	58 °F	55 °F	On Test		
27	10/23/11	8:10 AM	751 psig	53 °F	58 °F	55 °F			
28	10/23/11	8:20 AM	751 psig	55 °F	59 °F	55 °F			
29	10/23/11	8:30 AM	751 psig	57 °F	59 °F	55 °F	End Spike		
30	10/23/11	8:33 AM	741 psig	59 °F	59 °F	55 °F	Bleed	960 oz.	
31	10/23/11	8:36 AM	731 psig	59 °F	59 °F	55 °F	Bleed	960 oz.	
32	10/23/11	8:39 AM	721 psig	59 °F	59 °F	55 °F	Bleed	960 oz.	
33	10/23/11	8:41 AM	711 psig	59 °F	59 °F	55 °F	Bleed	960 oz.	
34	10/23/11	8:43 AM	701 psig	59 °F	59 °F	55 °F	Bleed	960 oz.	
35	10/23/11	8:45 AM	700 psig	59 °F	59 °F	55 °F	Bleed	96 oz.	
36	10/23/11	9:00 AM	700 psig	60 °F	59 °F	55 °F			
37	10/23/11	9:15 AM	701 psig	61 °F	59 °F	55 °F	Sun Shine		
38	10/23/11	9:30 AM	701 psig	62 °F	59 °F	55 °F			
39	10/23/11	9:45 AM	702 psig	65 °F	59 °F	55 °F			
40	10/23/11	10:00 AM	703 psig	69 °F	60 °F	55 °F			
41	10/23/11	10:15 AM	705 psig	67 °F	61 °F	55 °F			
42	10/23/11	10:30 AM	706 psig	71 °F	61 °F	55 °F			
43	10/23/11	10:45 AM	707 psig	72 °F	62 °F	56 °F	Sun Shine		
44	10/23/11	11:00 AM	708 psig	72 °F	62 °F	56 °F			
45	10/23/11	11:15 AM	708 psig	75 °F	63 °F	56 °F	Clear		
46	10/23/11	11:30 AM	708 psig	78 °F	64 °F	56 °F			
47	10/23/11	11:45 AM	709 psig	76 °F	65 °F	56 °F			



Pipe Segment Volume Calculations

Company	Pacific Gas and Electric Company	Job Number	41497359
Construction Co.	AKB	Job Number	0629-53-3500 T-24
Hydro. Test Co.	AKRI	Project No.	T-24 10/23/11
Test Section	PG&E T-24, L-132, MP 0.945 - 1.88	WATER	
File Name	PGP 61362 - T-24, L-132, MP 0.945 - 1.88		

General Pipe Data							
Description	Segment						
	1	2	3	4	5	6	
Restrained or Unrestrained?	Unrestrained	Restrained	Restrained	Restrained	Restrained	Unrestrained	
Outside Diameter	24.000 in.	24.000 in.	24.000 in.	24.000 in.	24.000 in.	24.000 in.	
Wall Thickness	0.375 in.	0.281 in.	0.313 in.	0.313 in.	0.344 in.	0.500 in.	
Inside Diameter	23.250 in.	23.438 in.	23.375 in.	23.375 in.	23.312 in.	23.000 in.	
Spec./Grade	API5L-X60	40kmys	API5L-X60	API5L-X52	API5L X42	API5L-X65	
Length Unrestrained	50 ft					22 ft	
Length Restrained		4,937 ft	17 ft	112 ft	49 ft		
Temperature -- On Test	58 °F	55 °F	55.0 °F	55.0 °F	55.0 °F	58.0 °F	
Temperature -- End of Test	70 °F	57 °F	57.0 °F	57.0 °F	57.0 °F	70.0 °F	
Pressure -- On Test	751 psig	751 psig	751 psig	751 psig	751 psig	751 psig	
Pressure -- End of Test	708 psig	708 psig	708 psig	708 psig	708 psig	708 psig	

Unrestrained Pipe							
Vo	1,577.57 gal		Vtp1	1,584.26 gal		Vtp2	1,582.31 gal
	201,929 oz.			202,785 oz.			202,536 oz.
Vo Unrestrained	1,103 gal					475 gal	
Fwp 1	1.002300					1.002300	
Fpp 1	1.001940					1.001439	
Fpt 1	0.999964					0.999964	
Fwt 1	0.999819					0.999819	
Fpwt 1 = Fpt/Fwt	1.000145					1.000145	
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	1,107.59 gal					476.68 gal	
Fwp 2	1.002168					1.002168	
Fpp 2	1.001829					1.001357	
Fpt 2	1.000182					1.000182	
Fwt 2	1.001036					1.001036	
Fpwt = Fpt/Fwt	0.999146					0.999146	
Vtp = Vo(Fwp)(Fpp)(Fpwt)	1,106.21 gal					476.10 gal	

Restrained Pipe							
Vo	114,615.26 gal		Vtp1	115,132.65 gal		Vtp2	115,092.06 gal
	14,670,754 oz.			14,736,979 oz.			14,731,783 oz.
Vo Unrestrained		110,653 gal	379 gal	2,497 gal	1,086 gal		
Fwp 1		1.002300	1.002300	1.002300	1.002300		
Fpp 1		1.001882	1.001686	1.001686	1.001526		
Fpt 1		0.999940	0.999940	0.999940	0.999940		
Fwt 1		0.999605	0.999605	0.999605	0.999605		
Fpwt 1 = Fpt/Fwt		1.000335	1.000335	1.000335	1.000335		
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		111,153 gal	381 gal	2,508 gal	1,091 gal		
Fwp 2		1.002168	1.002168	1.002168	1.002168		
Fpp 2		1.001780	1.001596	1.001596	1.001445		
Fpt 2		0.999964	0.999964	0.999964	0.999964		
Fwt 2		0.999749	0.999749	0.999749	0.999749		
Fpwt = Fpt/Fwt		1.000215	1.000215	1.000215	1.000215		
Vtp = Vo(Fwp)(Fpp)(Fpwt)		111,114 gal	380 gal	2,507 gal	1,091 gal		

Combined Pipe							
Vo	116,192.84 gal		Vtp1	116,716.91 gal		Vtp2	116,674.37 gal
	14,872,683 oz.			14,939,764 oz.			14,934,319 oz.



Pipe Segment Volume Allowance Calculations

Company	Pacific Gas and Electric Company	Job Number	41497359
Construction Co.	ARB	Job Number	0629-53-3500 T-24
Hydro. Test Co.	AKRI	Project No.	T-24 10/23/11
Test Section	PG&E T-24, L-132, MP 0.945 - 1.88	WATER	
File Name	RCP 61362 - T-24, L-132, MP 0.945 - 1.88		

Description	Segment					
	1	2	3	4	5	6
Restrained or Unrestrained?	Unrestrained	Restrained	Restrained	Restrained	Restrained	Unrestrained
Outside Diameter	24.000 in.	24.000 in.	24.000 in.	24.000 in.	24.000 in.	24.000 in.
Wall Thickness	0.375 in.	0.281 in.	0.313 in.	0.313 in.	0.344 in.	0.500 in.
Inside Diameter	23.250 in.	23.438 in.	23.375 in.	23.375 in.	23.312 in.	23.000 in.
Spec./Grade	API5L-X60	40ksmys	API5L-X60	API5L-X52	API5L-X42	API5L-X65
Length Unstrained	50 ft					22 ft
Length Restrained		4,937 ft	17 ft	112 ft	49 ft	
Temperature -- On Test	63 °F	55 °F	55 °F	55 °F	55 °F	63 °F
Temperature -- End of Test	64 °F	56 °F	56 °F	56 °F	56 °F	64 °F
Pressure -- On Test	729 psig	729 psig	729 psig	729 psig	729 psig	729 psig
Pressure -- End of Test	729 psig	729 psig	729 psig	729 psig	729 psig	729 psig

Unrestrained Pipe					
Vo	1,577.57 gal 201,929 oz.		Vtp1	1,583.51 gal 202,689 oz.	
Vo Unrestrained	1,103 gal				475 gal
Fwp 1	1.002232				1.002232
Fpp 1	1.001883				1.001397
Fpt 1	1.000055				1.000055
Fwt 1	1.000267				1.000267
Fpwt 1 = Fpt/Fwt	0.999788				0.999788
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	1,107.05 gal				476.45 gal
Fwp 2	1.002232				1.002232
Fpp 2	1.001883				1.001397
Fpt 2	1.000073				1.000073
Fwt 2	1.000375				1.000375
Fpwt = Fpt/Fwt	0.999698				0.999698
Vtp = Vo(Fwp)(Fpp)(Fpwt)	1,106.95 gal				476.41 gal

Restrained Pipe					
Vo	114,615.26 gal 14,670,754 oz.		Vtp1	115,118.53 gal 14,735,171 oz.	
Vo Restrained		110,653 gal	379 gal	2,497 gal	1,086 gal
Fwp 1		1.002232	1.002232	1.002232	1.002232
Fpp 1		1.001826	1.001636	1.001636	1.001481
Fpt 1		0.999940	0.999940	0.999940	0.999940
Fwt 1		0.999605	0.999605	0.999605	0.999605
Fpwt 1 = Fpt/Fwt		1.000335	1.000335	1.000335	1.000335
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		111,140 gal	381 gal	2,507 gal	1,091 gal
Fwp 2		1.002232	1.002232	1.002232	1.002232
Fpp 2		1.001830	1.001640	1.001640	1.001484
Fpt 2		0.999952	0.999952	0.999952	0.999952
Fwt 2		0.999668	0.999668	0.999668	0.999668
Fpwt = Fpt/Fwt		1.000283	1.000283	1.000283	1.000283
Vtp = Vo(Fwp)(Fpp)(Fpwt)		111,134 gal	381 gal	2,507 gal	1,091 gal

Combined Pipe					
Vo	116,192.84 gal 14,872,683 oz.		Vtp1	116,702.03 gal 14,937,860 oz.	
1 °F Change	5.67 gal		725.79 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	50 ft	Unrestrained	24.000 in.	0.3750 in.	API5L-X60	1,875 psig	Steel	Arc Weld	DSAW
2	4,937 ft	Restrained	24.000 in.	0.2810 in.	40ksmys	937 psig	Steel	Arc Weld	OTH
3	17 ft	Restrained	24.000 in.	0.3125 in.	API5L-X60	1,563 psig	Steel	Arc Weld	DSAW
4	112 ft	Restrained	24.000 in.	0.3125 in.	API5L-X52	1,354 psig	Steel	Arc Weld	DSAW
5	49 ft	Restrained	24.000 in.	0.3440 in.	API5L-X42	1,204 psig	Steel	Arc Weld	DSAW
6	22 ft	Unrestrained	24.000 in.	0.5000 in.	API5L-X65	2,708 psig	Steel	Arc Weld	DSAW
<i>Test head</i>									

Hydrostatic Test Project Owner & Participants

Owner Company	Pacific Gas and Electric Company	Job Number
Address	350 N. Wiget Walnut Creek, CA 94598 Attention: Redacted	41497359
Construction Company	ARB	Job Number
Address	1875 Loveridge Road Pittsburg, CA 94565 Attention: Redacted	0629-53-3500 T-24
Hydrostatic Test Co.	AKRI	Project No.
Address	1414 Vahlhalla Drive Bakersfield, CA 93309	T-24 10/23/11
Test Section	PG&E T-24, L-132, MP 0.945 - 1.88 From: 51+07 To: 0+00	
File Name	RCP 61362 - T-24, L-132, MP 0.945 - 1.88	

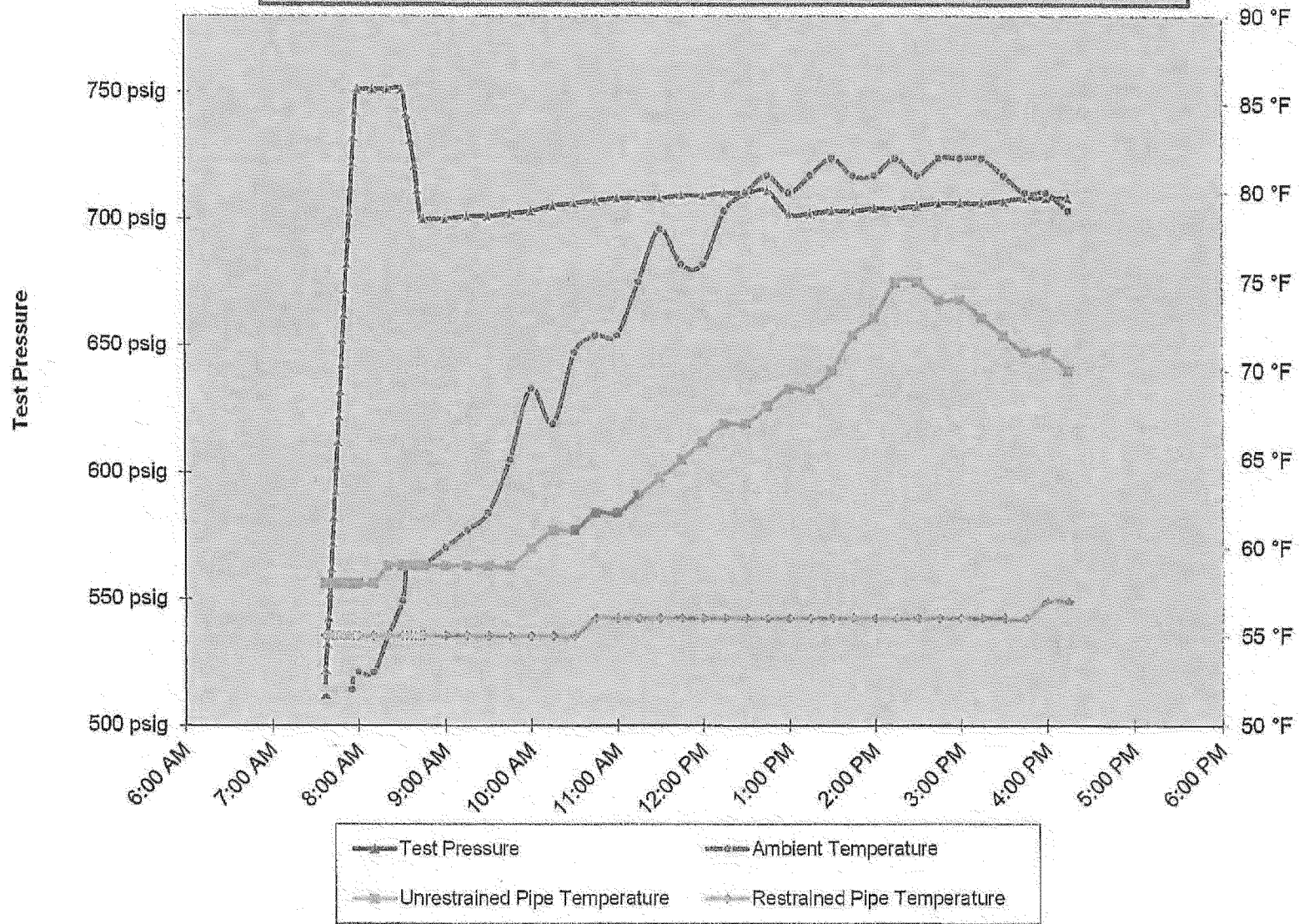
Part II - Test Data (TO BE PREPARED BY PERSON SUPERVISING TEST AT TIME OF TEST)

Note: Minimum test pressure and duration are not to be changed without written approval.

Time and Date Test Pressure Reached	10/23/11 8:00 AM	Elevation at Test Point	14 ft	Min. Required Test Press At Test Point (1)	683.47 psig	Max. Allowable Test Press at Test Point (4)	755.00 psig
Time and Date Test Ended	10/23/11 4:15 PM	Max. Elevation in Test Section	22 ft	Min. Indicated Test Pressure (2)	700.00 psig	Max. Indicated Test Pressure (5)	751.00 psig
Actual Duration of Test	8 hours 15 minutes	Min. Elevation in Test Section	14 ft	Min. Test Pressure at Max. Elevation (3)	696.53 psig	Max. Test Pressure at Min. Elevation (6)	751.00 psig

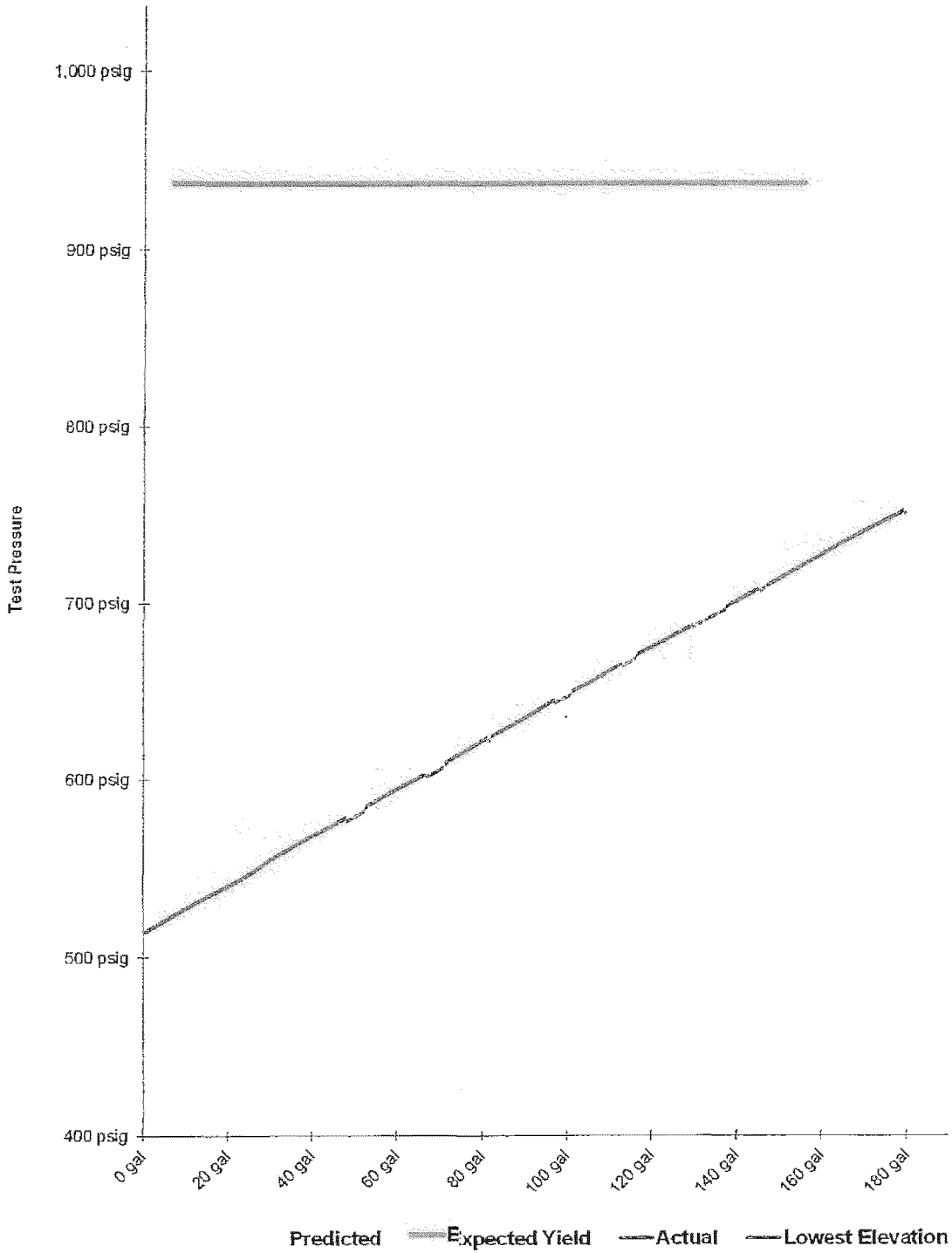


PG&E T-24 , L-132 , MP 0.945 - 1.88



C:\Users\Redacted\Documents\PG&E Pressure tests\T-24\
Test 24a
PlotT

Spike Pressure Test
Stress Strain Curve -- PG&E T-24 , L-132 , MP 0.945 - 1.88

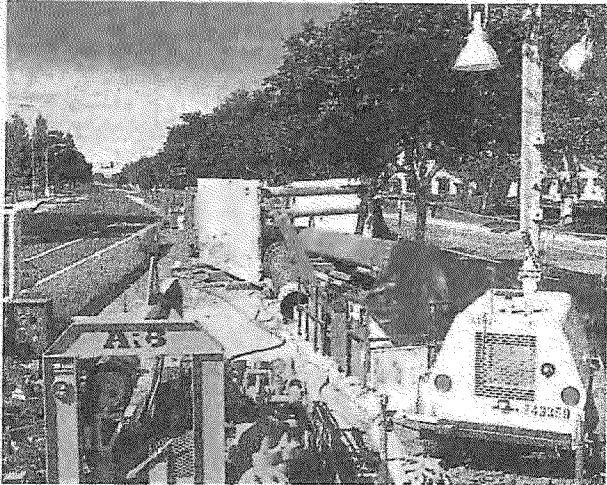




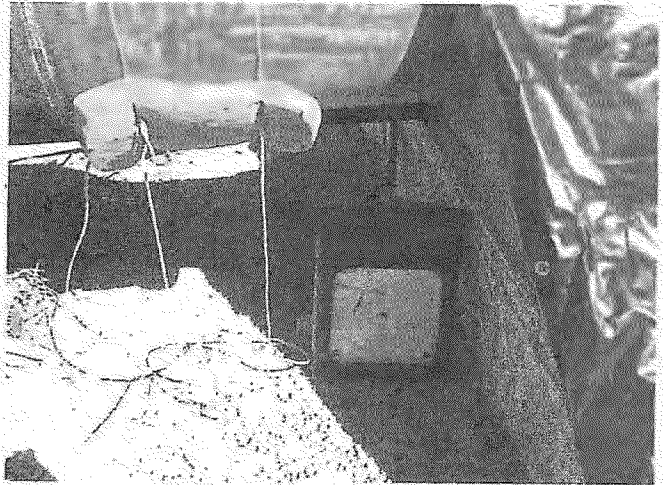
Actual Pressure Volume Plot Data			Predicted Pressure Volume Plot Data	Slope		Spike Pressure Test Stress Strain Curve -- PG&E T-24, L-132, MP 0.945 - 1.88	
Pressure	Strokes	Gallons	Gallons	Actual	Predicted		
512 psig	0	0.00 gal		0	0.000	39250	0.067 gal/stroke
522 psig	51	7.44 gal	6.50 gal	0.744	0.650	Pump Piston Diameter	1.375 in
532 psig	103	15.02 gal	12.99 gal	0.758	0.650	Pump Piston Stroke	3.50 in
542 psig	159	23.19 gal	19.49 gal	0.817	0.650	Pump Cylinders	3 ea
552 psig	202	29.46 gal	25.99 gal	0.627	0.650	Volume check gal per stroke	0.146 gal/stroke
562 psig	251	36.61 gal	32.49 gal	0.715	0.650	Volume Released (gallons)	7.50 gal
572 psig	305	44.48 gal	38.99 gal	0.788	0.650	Pressure Reduced (psi)	10 psi
582 psig	356	51.92 gal	45.49 gal	0.744	0.650	Maximum2	190 gal
592 psig	406	59.22 gal	51.99 gal	0.729	0.650	Minimum2	0 gal
602 psig	460	67.09 gal	58.49 gal	0.788	0.650	Maximum1	1,037 psig
612 psig	508	74.09 gal	64.99 gal	0.700	0.650	Minimum1	400 psig
622 psig	557	81.24 gal	71.49 gal	0.715	0.650	Gallons/Stroke Used	0.146 gal/stroke
632 psig	610	88.97 gal	77.99 gal	0.773	0.650	Predicted Gallons/Stroke	0.126 gal/stroke
642 psig	659	96.12 gal	84.49 gal	0.715	0.650	Pressure Increment	10 psi
652 psig	714	104.14 gal	91.00 gal	0.802	0.650		
662 psig	765	111.58 gal	97.50 gal	0.744	0.650	Max Pressure	751 psig
672 psig	815	118.87 gal	104.00 gal	0.729	0.650		
682 psig	870	126.89 gal	110.50 gal	0.802	0.650	Buried Pipe Temperature	55 °F
692 psig	917	133.74 gal	117.01 gal	0.685	0.650		
702 psig	970	141.47 gal	123.51 gal	0.773	0.650	Exposed Pipe Temperature	58 °F
712 psig	1024	149.35 gal	130.02 gal	0.788	0.650		
722 psig	1074	156.64 gal	136.52 gal	0.729	0.651	ASME B31.8 Appendix N-5	
732 psig	1124	163.94 gal	143.03 gal	0.729	0.651		
742 psig	1179	171.96 gal	149.53 gal	0.802	0.651	Average Actual Elastic Slope	0.750
751 psig	1229	179.25 gal	155.39 gal	0.810	0.651	Average Predicted Elastic Slope	0.650
751 psig		179.25 gal	155.39 gal	0.000	0.000	Code Prescribed Minimum Yield Slope (less 10%) B31.8 N-5 (c)(2)	1.425
751 psig		179.25 gal	155.39 gal	0.000	0.000	Established Minimum Yield Pressure B31.8 N-5 (c)(2)	751 psig
751 psig		179.25 gal	155.39 gal	0.000	0.000	Maximum Allowed Volume (After Slope Deviation) B31.8 N-5 (c)(2)	418 gal
751 psig		179.25 gal	155.39 gal	0.000	0.000	Volume (After Slope Deviation) B31.8 N-5 (c)(2)	0 gal
751 psig		179.25 gal	155.39 gal	0.000	0.000	Redacted	
751 psig		179.25 gal	155.39 gal	0.000	0.000		
751 psig		179.25 gal	155.39 gal	0.000	0.000		
751 psig		179.25 gal	155.39 gal	0.000	0.000		
751 psig		179.25 gal	155.39 gal	0.000	0.000		
751 psig		179.25 gal	155.39 gal	0.000	0.000		
751 psig		179.25 gal	155.39 gal	0.000	0.000		
751 psig		179.25 gal	155.39 gal	0.000	0.000		
751 psig		179.25 gal	155.39 gal	0.000	0.000		
751 psig		179.25 gal	155.39 gal	0.000	0.000		

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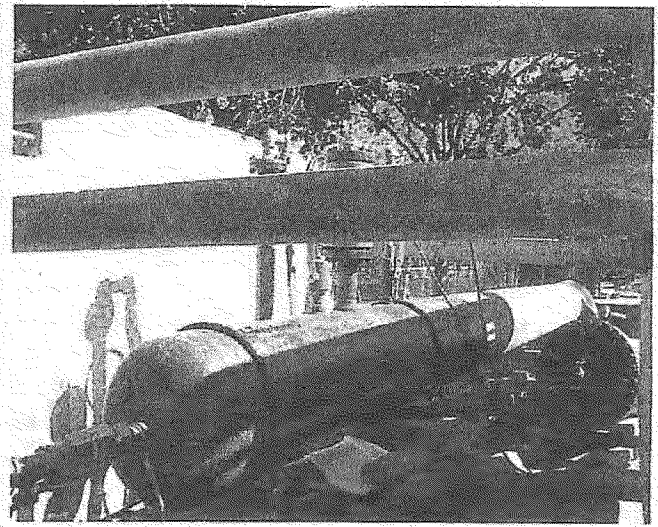
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Unrestrained Temp Recorder and Chart



Test Header Location A

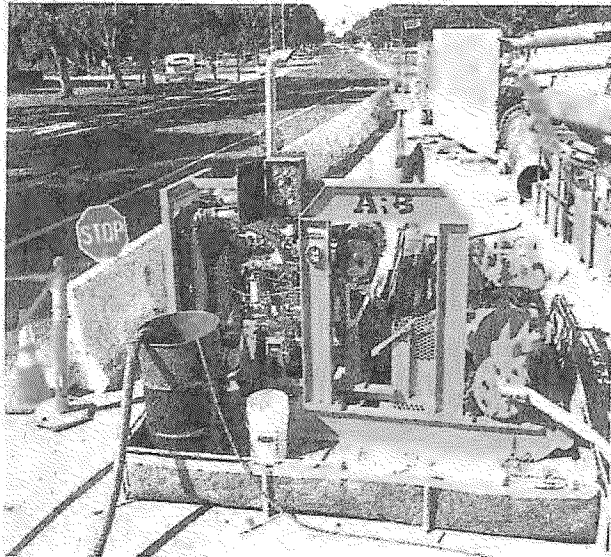


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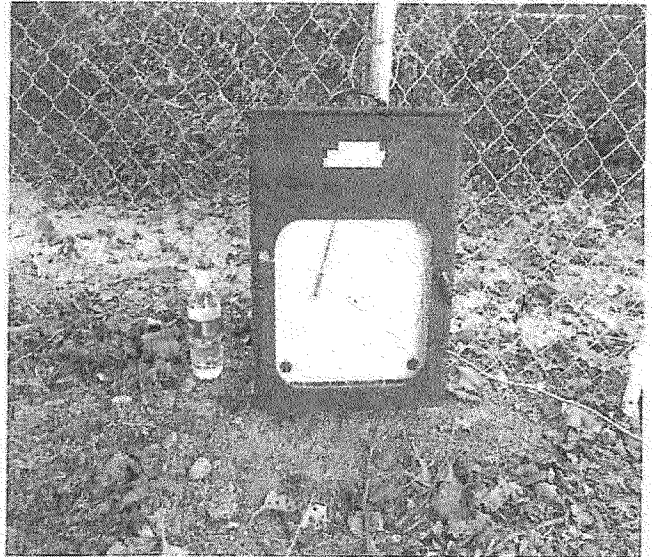
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Pressure Pump



Restrained Temp Recorder and Chart



Deadweight Tester and Pressure Recorder

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