Pacific Gas and Electric Company

Gas Pipeline Facilities Strength Test Pressure Report

(For Pipeline Facilities Designed to Operate over 100 PSIG)

62-4921 (Rev. 2/04)
California Gas Transmission
(Use in Accordance with Gas Standard A-34 and GO 112-D)

Sheet 1 of 3

PART I - DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER)

Feeder Main Number, Line Number, or Station Name	Area	Division/District	Job Number	Date Job Authorized
L-105N	2	East Bay	41497369	8/22/11

Description of Job -- Include Reference Drawing Numbers, and Pipeline Mileposts

Test 2 – Hydrostatically test tie-in pieces, hydrostatic test piping and existing 26", & New 24" MLV, Bridle, and Blow off on L-105N. Existing pipeline material listed; ie, pipe, elbows, sleeves, are from the "Material of Record" (refer to Dwg 41497369, sheet 5 of 5)

Hydrotest L-105N from MP 27.94 – 28.13 Oakland, CA (Test section 15)

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
3	.5	198 PSIG	275 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)			Static Head Calculation		
	Max. Elevation	32 Ft.	For Water	0.433 X Elev. Diff. =	3 PSIG
	Min. Elevation	25 Ft.	Other (Specify)		
	Elev. Diff.	7 Ft.		X Elev. Diff. =	PSIG

Pipe Specification: Size O.D.	Size W.T.	API or ASTM Grade Long Seam (ERW, DSAW, Seamless, Etc.)	Footage to Be Tested	Pipe Spec. and Footage Verified In Field	% of SMYS: At MAOP	At Min. Test Press.	At Max. Test Press.	Pressure to Give 90% SMYS
26.00	0.375	X-33 SSAW (Item #1)	~~940'~~	947' A	20.80	35.40	39.92	857
26.00	0.375	API 5L X-65, DSAW (Item #105)	~~22'~~	30' Tm	10.56	17.97	20.27	1688
24.00	0.375	API 5L X-60, DSAW (Item #106)	~~30' 22'~~	~~35'~~ 35' Tm	10.56	17.97	20.27	1688
8.625	0.322	API 5L Gr. B SMLS (Item #112)	~~30'~~	14' Tm	7.58	12.90	14.54	2352
6.625	0.280	API 5L Gr. B SMLS (Item #113)	~~30'~~ 22'	~~30'~~ Tm	6.69	11.39	12.84	2663
1.050	0.154	API 5L Gr. B SMLS (Item #223)	~~30'~~	29' Tm	1.93	3.28	3.70	9240
26.00	0.375	Elbow, API 5L Y-60 90° (Item #122)	2 Ea.	Tm	11.44	19.47	21.96	1558
24.00	0.375	Elbow, API 5L Y-60 90° (Item #123)	2 Ea.	Tm	10.56	17.97	20.27	1688

Minimum Test Pressure @ Max. Elevation	337 PSIG	Test Fluid To Be Used WATER	MINIMUM TEST DURATION - UNDER 30% SMYS (1 HR. MINIMUM) - 30% SMYS & OVER (8 HRS. MINIMUM) - PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)	8 HOURS
Maximum Test Pressure @ Min. Elevation	380 PSIG			

Prepared By:	Date:	For Information or Changes, Call:	Approved By:	Date:
Redacted	8/22/11	Mark Cabral (925) 588-3640	Mark O Cabral	9-22-11

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	9:30 am 9-11-11	Elevation at Test Point	25' FT	Min. Required Test Press. At Test Point (1)	340 PSIG	Max. Allowable Test Press at Test Point (4)	380 PSIG
Time and Date Test Ended	5:45 pm 9-11-11	Max. Elevation in Test Section	32' FT	Min. Indicated Test Pressure (2)	348 PSIG	Max. Indicated Test Pressure (5)	374 PSIG
Actual Duration of Test	8hr-15min	Min. Elevation in Test Section	25' FT	Min. Test Pressure at Max. Elevation (3)	345 PSIG	Max. Test Pressure at Min. Elevation (6)	374 PSIG

Test Fluid Used	Pipe Specification and Footage Verified (See Part I)
Water	TM-A550 A-A650

Make, Range, and Serial No. of Pressure Recording Gauge	Date Last Calibrated	Make, Range, and Serial No. of Dead Weight Tester (See Note 7)	Date Last Calibrated
CLP 0-500psi 1703	5-25-11	Ametek 0-3000psi HL-6301	6-7-11

Test Supervised By:	Date:	Approved By:	Date:
Redacted Redac	9-11-11	Redacted	11-9-11

PUT SCHEMATIC PIPING SKETCH ON BACK OF THIS SHEET

SHOW LOCATION OF FACILITY TESTED, MINIMUM AND MAXIMUM ELEVATION IN FEET, MILE POINTS, VALVE NUMBERS AND INCORPORATED AREAS. USE AN ADDITIONAL SHEET IF NECESSARY (SHOW REFERENCE NUMBERS ON FACE OF ALL DRAWINGS AND ATTACHMENTS). FOR STATION PIPING, FABRICATED UNITS AND SHORT SECTIONS OF PIPE, ALSO SHOW A DETAILED SKETCH OF EACH ASSEMBLY TESTED.

NOTES:

(1) Add the static head due to elevation difference (between test point and maximum elevation) to "minimum test pressure at maximum elevation" from PART I.
(2) Use lowest pressure on test gauge at any time during test.
(3) Subtract static head due to elevation difference (between test point and maximum elevation) from minimum indicated test pressure.
(4) Subtract static head due to elevation difference (between test point and minimum elevation) from "maximum test pressure at minimum elevation" from PART I.
(5) Highest pressure on test gauge at any time during test.
(6) Add static head due to elevation difference (between test point and minimum elevation) to maximum indicated test pressure.
(7) A dead weight tester is only required when testing to a pressure which produces a stress level of 90% of SMYS or greater. However, if a dead weight tester is used on any test, enter the information in the space provided above.

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JOB FILE (AT SPONSORING ORGANIZATION)
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REPORT FAILURES UNDER TEST TO GAS ENGINEERING & PLANNING

FINAL

Pacific Gas and Electric Company

Gas Pipeline Facilities Strength Test Pressure Report

(For Pipeline Facilities Designed to Operate over 100 PSIG)

62-4921 (Rev. 2/04)
California Gas Transmission
(Use in Accordance with Gas Standard A-34 and GO 112-D)

PART I - DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER)

Feeder Main Number, Line Number, or Station Name	Area	Division/District	Job Number	Date Job Authorized
L-105N	2	East Bay	41497369	8/22/11

Description of Job -- Include Reference Drawing Numbers, and Pipeline Mileposts

Test 2 – Hydrostatically test tie-in pieces, hydrostatic test piping and existing 26", & New 24" MLV, Bridle, and Blow off on L-105N. Existing pipeline material listed; ie. pipe, elbows, sleeves, are from the "Material of Record" (refer to Dwg 41497369, sheet 5 of 5)

Hydrotest L-105N from MP 27.94 – 28.13 Oakland, CA (Test section 15)

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
3	.5	198 PSIG	275 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)			Static Head Calculation		
	Max. Elevation	32 Ft.	For Water	0.433 X Elev. Diff. =	3 PSIG
	Min. Elevation	25 Ft.	Other (Specify)	X Elev. Diff. =	PSIG
	Elev. Diff.	7 Ft.			

Pipe Specification				Pipe Spec. and Footage Verified In Field	% of SMYS			Pressure to Give 90% SMYS
Size O.D.	Size W.T.	API or ASTM Grade Long Seam (ERW, DSAW, Seamless, Etc.)	Footage to Be Tested		At MAOP	At Min. Test Press.	At Max. Test Press.	
24.00	0.375	Valve, Y-60, ANSI 300 (item #144)	1 Ea.	TM	10.56	19.97	20.27	1688
8.625	0.322	Valve, Gr. B, ANSI 300 (item #148)	2 Ea.	TM	7.58	12.90	14.54	2352
26.00	0.375	Reducer, 26" x 24" Y-60 (item #200)	1 Ea.	TM	11.44	19.47	21.96	1558
8.625	0.322	Tee, Gr. B (item #201)	1 Ea.	TM	7.58	12.90	14.54	2352
6.625	0.280	Valve, Gr. B, ANSI 300 (item #202)	2 Ea.	TM	6.69	11.39	12.84	2663
6.625	0.280	Elbow, Gr. B, 90 Deg (item #210)	~~2~~ 4 Ea.	TM	6.69	11.39	12.84	2663
6.625	0.280	Tee, Gr. B, (item #211)	1 Ea.	TM	6.69	11.39	12.84	2663
8.625	0.322	Elbow, Gr. B, 90 Deg (item #214)	1 Ea.	TM	7.58	12.90	14.54	2352

		Test Fluid To Be Used	MINIMUM TEST DURATION	
Minimum Test Pressure @ Max. Elevation	337 PSIG	WATER	- UNDER 30% SMYS (1 HR. MINIMUM)	8 HOURS
Maximum Test Pressure @ Min. Elevation	380 PSIG		- 30% SMYS & OVER (8 HRS. MINIMUM)	
			- PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)	

Prepared By:	Date:	For Information or Changes, Call:	Approved By:	Date:
Redacted	8/22/11	Mark Cabral (925) 588-3640	Mark Cabral	8-22-11

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.

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Time and Date Test Ended	5:45pm 9-11-11	Max. Elevation in Test Section	32' FT	Min. Indicated Test Pressure (2)	348 PSIG	Max. Indicated Test Pressure (5)	374 PSIG
Actual Duration of Test	8hr - 15min	Min. Elevation in Test Section	25' FT	Min. Test Pressure at Max. Elevation (3)	345 PSIG	Max. Test Pressure at Min. Elevation (6)	374 PSIG

Test Fluid Used	Pipe Specification and Footage Verified (See Part I)
Water	TM-A550

Make, Range, and Serial No. of Pressure Recording Gauge	Date Last Calibrated	Make, Range, and Serial No. of Dead Weight Tester (See Note 7)	Date Last Calibrated
CLP 0-500 psi 1703	5-25-11	Ametek 0-3000psi HL-6301	6-7-11

Test Supervised By	Date:	Approved	Date:
Redacted	9-11-11	Redacted	11-9-11

PUT SCHEMATIC PIPING SKETCH ON BACK OF THIS SHEET

SHOW LOCATION OF FACILITY TESTED, MINIMUM AND MAXIMUM ELEVATION IN FEET, MILE POINTS, VALVE NUMBERS AND INCORPORATED AREAS. USE AN ADDITIONAL SHEET IF NECESSARY (SHOW REFERENCE NUMBERS ON FACE OF ALL DRAWINGS AND ATTACHMENTS). FOR STATION PIPING, FABRICATED UNITS AND SHORT SECTIONS OF PIPE, ALSO SHOW A DETAILED SKETCH OF EACH ASSEMBLY TESTED.

NOTES:

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	Elev. Diff.	7 Ft.			

Pipe Specification				Pipe Spec. and Footage Verified In Field	% of SMYS			Pressure to Give 90% SMYS
Size O.D.	Size W.T.	API or ASTM Grade Long Seam (ERW, DSAW, Seamless, Etc.)	Footage to Be Tested		At MAOP	At Min. Test Press.	At Max. Test Press.	
6.625	0.280	Elbow, Gr. B, 45 Deg (item #221)	2 Ea.	& TM	6.69	11.39	12.84	2663
1.050	0.154	Valve Tee, Mueller H-17656 (item #222)	4 Ea.	TM	1.93	3.28	3.70	9240
1.050	0.154	Elbow, ¾" Socket Weld (item #224)	14 Ea.	12 TM	1.93	3.28	3.70	9240

Minimum Test Pressure @ Max. Elevation	337 PSIG	Test Fluid To Be Used WATER	MINIMUM TEST DURATION - UNDER 30% SMYS (1 HR. MINIMUM) - 30% SMYS & OVER (8 HRS. MINIMUM) - PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)	8 HOURS
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Redacted	8/22/11	Mark Cabral (925) 588-3640	Mark Cabral	3-22-11

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Actual Duration of Test	8hr - 15 min	Min. Elevation in Test Section	25' FT	Min. Test Pressure at Max. Elevation (3)	345 PSIG	Max. Test Pressure at Min. Elevation (6)	374 PSIG

Test Fluid Used	Pipe Specification and Footage Verified (See Part I)
Water	TM-A550

Make, Range, and Serial No. of Pressure Recording Gauge	Date Last Calibrated	Make, Range, and Serial No. of Dead Weight Tester (See Note 7)	Date Last Calibrated
CLP ø - 5000psi . 1703	5-25-11	Amerk ø - 3000psi HL-6301	6-7-11

Test Supervised By:	Date:	Approved By:	Date:
Redacted	9-11-11	Redacted	11-7-11

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