Pacific Gas and Electric Company

Gas Pipeline Facilities Strength Test Pressure Report

(For Pipeline Facilities Designed to Operate over 100 PSIG)

COPY

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-132	3	De Anza	41497350	July 27, 2011

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

Test 2 – Tie-in pieces, hydrostatic test piping and existing 24" L-132. Existing pipeline material listed; ie. pipe, elbows, sleeves, are from the "Material of Record" (refer to Dwg 41497350, sheet 7 of 7)

Hydrotest L-132 from MP 10.32 – 13.95 Mountain View, CA (Test section 29)

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
3	.5	400 PSIG	400 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)

Max. Elevation 32 Ft.
Min. Elevation 1 Ft.
Elev. Diff. 31 Ft.

Static Head Calculation
For Water 0.433 X Elev. Diff. = 14 PSIG
Other (Specify) 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
30.00	.375	API 5L, X-65, DSAW (Item #103)	2'	2	24.62	36.92	41.85	1463
24.00	.375	API 5L, X-60, DSAW (Item #106)	43'	42.4 JE	21.33	32.00	36.27	1688
30.00	.3125	API 5L, X-52, DSAW (Item #1)	3278'	MOR	36.92	55.38	62.77	975
24.00	.344	API 5L, GR. B, SMLS (Item #3)	5'	6	39.87	59.80	67.77	903
24.00	.3125	API 5L, X-60, DSAW (Item #4)	1696'	+ 1679.3 JE	25.60	38.40	43.52	1406
24.00	.3125	API 5L, X-52, DSAW (Item #5)	155'	MOR	29.54	44.31	50.22	1219
24.00	.3125	API 5L, X-42, DSAW (Item #6)	5'	MOR	36.57	54.86	62.17	984
24.00	.281	45000 SMYS, SMLS (Item #7)	13600'	MOR	37.96	56.94	64.53	948
24.00	.281	40000 SMYS, SMLS (Item #8)	344'	MOR	42.70	64.06	72.60	843 MAX.

Minimum Test Pressure @ Max. Elevation	600 PSIG	Test Fluid To Be Used: WATER	MINIMUM TEST DURATION: 8 HOURS - UNDER 30% SMYS (1 HR. MINIMUM) - 30% SMYS & OVER (8 HRS. MINIMUM) - PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)
Maximum Test Pressure @ Min. Elevation	680 PSIG		

Prepared By: Redacted Date: 7/28/11
For Information or Changes, Call: Redacted
Approved By: Redacted Date: 7-27-11

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.

Test Conducted By THOR VAN BAXTEL CCI

Time and Date Test Pressure Reached	11:40 PM 9-9-11	Elevation at Test Point	32 FT	Min. Required Test Press. At Test Point (1)	600 PSIG	Max. Allowable Test Press at Test Point (4)	666.6 PSIG
Time and Date Test Ended	8:15 AM 9-10-11	Max. Elevation in Test Section	32 FT	Min. Indicated Test Pressure (2)	615 PSIG	Max. Indicated Test Pressure (5)	660 PSIG 843 PSIG OK
Actual Duration of Test	8HR 35 min	Min. Elevation in Test Section	1 FT	Min. Test Pressure at Max. Elevation (3)	615 PSIG	Max. Test Pressure at Min. Elevation (6)	673.4 PSIG

Test Fluid Used: WATER
Pipe Specification and Footage Verified (See Part I): Redacted

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, 0-1000 PSI, 1703	5-2-11	Ametek, 0-3000 PSI, HL-2845	11-29-10

Test Supervised By: Redacted Date: 9-10-11
Approved By: Redacted Date: 9-13-11

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.

DISTRIBUTION

JOB FILE (AT SPONSORING ORGANIZATION)
GSM&TS RESPONSIBLE DISTRICT SUPERINTENDENT
PROJECT MANAGER/PROJECT ENGINEER
TECHNICAL & CONSTRUCTION SERVICES - ASSIGNED JOBS ONLY
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RECORDS SECTION (WC), GMS&TS
REPORT FAILURES UNDER TEST TO GAS ENGINEERING & PLANNING

Pacific Gas and Electric Company

Gas Pipeline Facilities Strength Test Pressure Report

(For Pipeline Facilities Designed to Operate over 100 PSIG)

COPY

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-132	3	De Anza	41497350	July 27, 2011

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

Test 2 – Tie-in pieces, hydrostatic test piping and existing 24" L-132. Existing pipeline material listed; ie. pipe, elbows, sleeves, are from the "Material of Record" (refer to Dwg 41497350, sheet 7 of 7)

Hydrotest L-132 from MP 10.32 – 13.95 Mountain View, CA (Test section 29)

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
3	.5	400 PSIG	400 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)			Static Head Calculation		
	Max. Elevation	32 Ft.	For Water	0.433 X Elev. Diff. =	14 PSIG
	Min. Elevation	1 Ft.	Other (Specify)		
	Elev. Diff.	31 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
24.00	.250	API 5L, X-52, DSAW (Item #9)	18'	MOR	36.92	55.38	62.77	975
30.00	.375	Elbow, Y-52 (Item #10)	18 ea.	MOR	30.77	46.15	52.31	1170
30.00	.375	Elbow, Y-42 (Item #11)	3 ea.	MOR	38.10	57.14	64.76	945
30.00	.375	Elbow, Grade Unknown (Item #12)	~~6 ea.~~ Rec	MOR = 7 JC	–	–	–	–
24.00	.375	Elbow, Y-60 (Item #13)	18 ea.	MOR	21.33	32.00	36.27	1688
24.00	.375	Elbow, Y-52 (Item #14)	2 ea.	MOR	24.62	36.92	41.85	1463
24.00	.375	Elbow, Grade Unknown (Item #15)	1 ea.	MOR	–	–	–	–
24.00	.3125	Elbow, Grade Unknown (Item #16)	12 ea.	MOR	–	–	–	–

		Test Fluid To Be Used	MINIMUM TEST DURATION	
Minimum Test Pressure @ Max. Elevation	600 PSIG	WATER	- UNDER 30% SMYS (1 HR. MINIMUM)	8 HOURS
Maximum Test Pressure @ Min. Elevation	680 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	7/27/11	Redacted	Redacted	7-27-11

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.

TEST CONDUCTED BY THOR VAN BAXTER CCI

Time and Date Test Pressure Reached	11:40 PM 9-9-11	Elevation at Test Point	32 FT	Min. Required Test Press. At Test Point (1)	600 PSIG	Max. Allowable Test Press at Test Point (4)	666.6 PSIG
Time and Date Test Ended	8:15 AM 9-10-11	Max. Elevation in Test Section	32 FT	Min. Indicated Test Pressure (2)	615 PSIG	Max. Indicated Test Pressure (5)	660 PSIG
Actual Duration of Test	8 HR 35 min	Min. Elevation in Test Section	1 FT	Min. Test Pressure at Max. Elevation (3)	615 PSIG	Max. Test Pressure at Min. Elevation (6)	673.4 PSIG

673.4 < 675 PSI OK

Test Fluid Used	Pipe Specification and Footage Verified (See Part I)
WATER	JE ASB4

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, 0-1000 PSI, 1703	5-2-11	AMETEK, 0-3000 PSI HL-2845	11-29-10

Test Supervised By:	Date:	Approved By:	Date:
Redacted	9-10-11	9-13-11 Redacted	

PUT SCHEMATIC PIPING SKETCH ON BACK OF THIS SHEET

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NOTES:

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Sheet 3 of 3

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Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
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STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)

Max. Elevation 32 Ft.
Min. Elevation 1 Ft.
Elev. Diff. 31 Ft.

Static Head Calculation
For Water 0.433 X Elev. Diff. = 14 PSIG
Other (Specify) 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
30.00	.375	Reducer 30" X 24", Y-52 (Item #17)	2 ea.	MOR	30.77	46.15	52.31	1170
30.00	.375	Reducer 30" X 24", Y-42 (Item #18)	2 ea.	MOR	38.10	57.14	64.76	945
30.00	.500	Sleeve, X-52 (Item #19)	4 ea.	MOR	23.08	34.62	39.23	1560
24.00	.500	Sleeve, X-52 (Item #20)	3 ea.	MOR	18.46	27.69	31.38	1950
24.00	.500	Sleeve, X-50 (Item #21)	2 ea.	MOR	19.20	28.80	32.64	1875
24.00	.375	Sleeve, X-50 (Item #22)	1 ea.	MOR	25.60	38.40	43.52	1406
6.625	.280	API 5L, GR. B, SMLS (Item #27)	3'	MOR	13.52	20.28	22.98	2663
2.375	.154	API 5L, GR. B, SMLS (Item #29)	44'	MOR	8.81	13.22	14.98	4085

Minimum Test Pressure @ Max. Elevation	600 PSIG	Test Fluid To Be Used	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	680 PSIG	WATER		

Prepared By: Redacted Date:
For Information or Changes, Call: Redacted
Approved By: Redacted Date: 7-27-11

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Test Conducted By Thor Van Buitel CCI

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Time and Date Test Ended	8:15 AM 9-10-11	Max. Elevation in Test Section	32 FT	Min. Indicated Test Pressure (2)	615 PSIG	Max. Indicated Test Pressure (5)	660 PSIG	343 PSIG
Actual Duration of Test 8	8 HR 35 min	Min. Elevation in Test Section	1 FT	Min. Test Pressure at Max. Elevation (3)	615 PSIG	Max. Test Pressure at Min. Elevation (6)	673.4 PSIG	OK

Test Fluid Used: WATER

Pipe Specification and Footage Verified (See Part I): JR A584

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, 0-1000 PSI, 1703	5-2-11	AMETEK, 0-3000 PSI, HL-2845	11-29-10

Test Supervised By: Redacted Date: 9-10-11
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