Pacific Gas and Electric Company

Gas Pipeline Facilities Strength Test Pressure Report

(For Pipeline Facilities Designed to Operate over 100 PSIG)

FINAL

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	1	Peninsula	~~41474-7344~~ 41474078-T36A2	5/17/11

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

T-36 South-Hydrostatically test tie-in piping, hydrostatic test piping and existing 30" and 36" L-132. Existing material listed; ie. pipe, elbows, sleeves, are from the "Material of Record". (refer to DWG 41474078,Sht .9).

Hydro test l-132 from MP Redacted San Bruno, Ca (Test-Section 36 South-Location A to B)

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
3	.5	300 PSIG	300 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)				Static Head Calculation			
	Max. Elevation	366	Ft.	For Water	0.433 X Elev. Diff. =	141	PSIG
	Min. Elevation	41	Ft.	Other (Specify)		X Elev. Diff. =	PSIG
	Elev. Diff.	325	Ft.				

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	% of SMYS At Min. Test Press.	% of SMYS At Max. Test Press.	Pressure to Give 90% SMYS
36.00	0.500	API 5L, X-65, DSAW (Item#27)	23'	MOR	16.62	28.25	40.98	1625
30.00	0.375	API 5L, X-65, DSAW (Item#28)	38'	MOR	18.46	31.38	45.54	1462
30.00	0.375	API 5L, X-42, DSAW (item #1)	8'	MOR	28.57	48.57	70.48	945
36.00	0.360	API 5L, X-60, DSAW (item # 2)	2574.5'	MOR	25.00	42.50	61.67	1080
36.00	0.360	API 5L, X-52, DSAW (item #3)	857'	MOR	28.85	49.04	71.15	936
36.00	0.406	API 5L, X-52, DSAW (Item#4)	148'	MOR	25.58	43.48	63.09	1055
30.00	0.375	API 5L, X-52 DSAW (Item#5)	8317'	MOR	23.08	39.23	56.92	1170

Minimum Test Pressure @ Max. Elevation	510 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	740 PSIG			

Prepared By:	Date:	For Information or Changes, Call:	Approved:	Date:
Mark Cabral	06/03/11	Redacted	Redacted	6/4/11

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	1545 6/9/11 672 lbs	Elevation at Test Point	44 FT	Min. Required Test Press. At Test Point (1)	649 PSIG	Max. Allowable Test Press at Test Point (4)	739 PSIG
Time and Date Test Ended	0001 6/10/11	Max. Elevation in Test Section	366 FT	Min. Indicated Test Pressure (2)	671 PSIG	Max. Indicated Test Pressure (5)	727 PSIG
Actual Duration of Test	8hr - 1.5 min ~~8.25~~ hours	Min. Elevation in Test Section	41 FT	Min. Test Pressure at Max. Elevation (3)	532 PSIG	Max. Test Pressure at Min. Elevation (6)	728 PSIG

Test Fluid Used: City Water

Pipe Specification and Footag: 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
ITT Barton, 0-1,000, 242E-39611	6/7/2011	EG & G Chandler, 25-5,000 psi, 21495	10/25/2010

Redacted	Date: 6/10/2011	Redacted	Date: 6-30-11

FOR 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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REPORT FAILURES UNDER TEST TO GAS ENGINEERING & PLANNING

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California Gas Transmission
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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	1	Peninsula	~~41497344~~ 41474078-T36A2	5/17/11

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

T-36 South-Hydrostatically test tie-in piping, hydrostatic test piping and existing 30" and 36" L-132. Existing material listed; ie. pipe, elbows, sleeves, are from the "Material of Record". (refer to DWG 41474078,Sht .9).

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
3	.5	300 PSIG	300 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)			Static Head Calculation		
	Max. Elevation	366 Ft.	For Water	0.433 X Elev. Diff. =	141 PSIG
	Min. Elevation	41 Ft.	Other (Specify)	X Elev. Diff. =	PSIG
	Elev. Diff.	325 Ft.			

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	.3125	API 5L, X-52, DSAW (Item 6)	641'	MOR	27.69	47.08	68.31	975
4.500	.237	API 5L, Gr B, SMLS (Item #8)	2'	MOR	8.12	13.80	20.03	3325
36.00	.375	Elbow,Y-42 (Item#10)	1 Ea.	MOR	34.29	58.29	84.57	787
36.00	.375	Elbow, Y-52 (item #11)	23 Ea.	MOR	27.69	47.08	68.31	975
30.00	.375	Elbow, Y-33 (item #12)	14 Ea.	MOR	36.36	61.82	89.70	742
30.00	.375	Elbow,Y-52 (Item #13)	8 Ea.	MOR	23.08	39.23	56.92	1170
30.00	.3125	Elbow,Y-52 (Item #15)	4 Ea.	MOR	27.69	47.08	68.31	975

		Test Fluid To Be Used	MINIMUM TEST DURATION	
Minimum Test Pressure @ Max. Elevation	510 PSIG	WATER	- UNDER 30% SMYS (1 HR. MINIMUM)	8 HOURS
Maximum Test Pressure @ Min. Elevation	740 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	Date:
Mark Cabral	6/03/11	Redacted	Redacted	6/4/11

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

Time and Date Test Pressure Reached	1545 hr 6-9-11	Elevation at Test Point	44 FT	Min. Required Test Press. At Test Point	(1)	649 PSIG	Max. Allowable Test Press at Test Point	(4)	739 PSIG
Time and Date Test Ended	0001 hr 6-10-11	Max. Elevation in Test Section	366 FT	Min. Indicated Test Pressure	(2)	671 PSIG	Max. Indicated Test Pressure	(5)	727 PSIG
Actual Duration of Test	15 8hr-25min	Min. Elevation in Test Section	41 FT	Min. Test Pressure at Max. Elevation	(3)	532 PSIG	Max. Test Pressure at Min. Elevation	(6)	728 PSIG

Test Fluid Used: Water

Pipe Specification and Footage Verified (See Part I): Steve Knopke

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
ITT Barton 0-1,000 242E-3961	6-7-11	EG Chandler 25-5000 21495	10-25-10

Tes	Date:		Date:
Redacted	6/10/2011	Redacted	6-30-11

PUT SCHEMATIC PIPING SKETCH ON BACK OF THIS SHEET

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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	.532	Sleeve, 50,000 SMYS (Item 17)	3 Ea.	MOR	16.92	28.76	41.73	1596
36	.511	Sleeve, 50,000 SMYS (Item 19)	1 Ea.	MOR	21.14	35.93	52.13	1277
30	.312	Sleeve,50,000 SMYS (Item 21)	2 Ea.	MOR	28.85	49.04	71.15	936
30	.375	Pipe, X-65	40.2 Ft.	SK				
30	.375	Elbow, Y-60	2	SK				

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Actual Duration of Test	8 hr - 15 25 min	Min. Elevation in Test Section	41 FT	Min. Test Pressure at Max. Elevation (3)	532 PSIG	Max. Test Pressure at Min. Elevation (6)	728 PSIG

Test Fluid Used	Pipe Specific	Redacted
Water		

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
ITT Barton, 0-1,000, 242E-396	6-7-11		

Te	Redacted	Date: 6/10/2011	Redacted	Date: 6.30-11

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