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 1

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
SP5	2	Diablo	9715461	May 2, 2011

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

TEST 96A – Hydrostatically test tie-in piping, hydrostatic test piping and existing 24" SP-5. Existing pipeline material listed; ie. pipe, elbows, sleeves, etc. are from the "Material of Record" (refer to Dwg. 9715461, Sheet 7)

Hydrotest SP-5 from MP 0.00 – 2.40 Antioch, CA (Test section 96A)

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
3	.5	390 PSIG	600 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)			Static Head Calculation		
	Max. Elevation	57 Ft.	For Water	0.433 X Elev. Diff. =	16 PSIG
	Min. Elevation	19 Ft.	Other (Specify)		
	Elev. Diff.	38 Ft.		X Elev. Diff. =	PSIG

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	.375	API 5L, GR X-60, DSAW (item#106)	59'	57.1	20.80	31.20	36.53	1688
24.00	.3125	API 5L, GrX-42, DSAW (item #1)	12,717'	12,711.0	35.66	53.49	62.63	984
24.00	.375	Ell, Forged, Gr.B (item #4)	13 ea.	M.O.R.	35.66	53.49	62.63	984 MAX.
24.00	.375	Sleeve, Type B, X-52 (item #9)	1 ea	M.O.R.	24.00	36.00	42.15	1463
4.50	.156	API 5L, Gr X-42, ERW (item #11&12)	4'	M.O.R.	13.39	20.09	23.52	2621
4.50	.237	API 5L, Gr.B, SMLS (item #11 & # 12)	2'	M.O.R.	10.58	15.87	18.58	3318
3.50	.156	API 5L, Gr X-42, ERW (item #10)	2'	M.O.R.	10.42	15.63	18.30	3370
3.50	.216	API 5L, Gr.B, SMLS (item #10)	1'	M.O.R.	9.03	13.54	15.86	3888

Minimum Test Pressure @ Max. Elevation	585 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	685 PSIG	WATER		

Prepared By: Redacted (3) Date: 04/19/11 7/14/11

For Information or Changes, Call: Redacted

Approved By: Redacted Date: 7/15/11 (4)

PART II - TEST DATA (TO BE PREPARED BY PERSON SUPERVISING TEST AT TIME OF TEST)

Dan Dawson

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

Time and Date Test Pressure Reached	10:45 5-16-11	Elevation at Test Point	49 FT	Min. Required Test Press. At Test Point (1)	589 PSIG	Max. Allowable Test Press at Test Point (4)	672 PSIG
Time and Date Test Ended	18:45 5-16-11	Max. Elevation in Test Section	57 FT	Min. Indicated Test Pressure (2)	602 PSIG	Max. Indicated Test Pressure (5)	605 PSIG < 784 PSIG OK
Actual Duration of Test	8 hrs	Min. Elevation in Test Section	19 FT	Min. Test Pressure at Max. Elevation (3)	599 PSIG	Max. Test Pressure at Min. Elevation (6)	618 PSIG

Test Fluid Used	Pipe Specification and Footage Verified (See Part I)
Water	Above

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
CPL 703 0-1000 PSI	5-2-11	AMETEK 0-3500 PSI, S/N 2845	11-29-11

Test Supervisor: Redacted (2) Date: 7-14-11

Approved: Redacted 1 CLH7 Date: 7-13-11

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

CAPITAL ACCOUNTING (FOREMAN'S COPY OF JOB)

RECORDS SECTION (WC), GMS&TS

REPORT FAILURES UNDER TEST TO GAS ENGINEERING & PLANNING

1 - ORIGINAL FIELD DOCUMENT SIGNED ON 6-21-11

(2) - ORIGINAL DOCUMENT SIGNED 5-16-11

(3) ORIGINAL DOCUMENT SIGNED 4-19-11

(4) Original document signed 5/2/11

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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 1

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
SP5	2	Diablo	9715461	May 2, 2011

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

TEST 1 – Hydrostatically test temporary pups and tie-in pieces. Tie-in pieces replace piping removed downstream of tap valves to facilitate hydrostatic test (refer to Sheet 6, Details 5, 6 &7)

Hydrotest SP-5 from MP 0.00 – 3.87 Antioch, CA (Test section 96)

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
3	.5	390 PSIG	600 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)			Static Head Calculation		
	Max. Elevation	67 Ft.	For Water	0.433 X Elev. Diff. =	21 PSIG
	Min. Elevation	19 Ft.	Other (Specify)		
	Elev. Diff.	48 Ft.		X Elev. Diff. =	PSIG

Pipe Specification			Footage to Be Tested	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.)			At MAOP	At Min. Test Press.	At Max. Test Press.	
24.00	.375	API 5L, GR X-60, DSAW (item#106)	4'	0	20.80	31.20	36.53	1688 MAX
8.625	.188	API 5L, GR X-52, ERW (item#203)	3' 2"	0	17.20	25.81	30.22	2040
4.50	.237	API 5L, Gr.B SMLS (item#202)	6' 6"	4'	10.58	15.87	18.58	3318
3.50	.216	API 5L, Gr.B SMLS (item#201)	6'	8'	9.03	13.54	15.86	3888
8.625	.322	API 5L, Gr.B SMLS (field substitution)	4'	4'	22.96	22.39	26.21	2532

		Test Fluid To Be Used	MINIMUM TEST DURATION	
Minimum Test Pressure @ Max. Elevation	585 PSIG	WATER	- UNDER 30% SMYS (1 HR. MINIMUM)	8 HOURS
Maximum Test Pressure @ Min. Elevation	685 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	04/19/11	Redacted		

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	7:15 am 5-19-11	Elevation at Test Point	0 FT	Min. Required Test Press. At Test Point (1)	585 PSIG	Max. Allowable Test Press at Test Point (4)	685 PSIG
Time and Date Test Ended	3:15 pm 5-19-11	Max. Elevation in Test Section	0 FT	Min. Indicated Test Pressure (2)	605 PSIG	Max. Indicated Test Pressure (5)	611 PSIG < 1,633 PSIG OK
Actual Duration of Test	8 hrs	Min. Elevation in Test Section	0 FT	Min. Test Pressure at Max. Elevation (3)	605 PSIG	Max. Test Pressure at Min. Elevation (6)	611 PSIG

Test Fluid Used	Pipe Specification and Footage Verified (See Part I)
H2O	

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
CPL 1703-0-1000 PSI	5-2-11	AMETEK, 0-3500 PSI, S/N 2845	11/29/10

Test S	Date:		Date:
Redacted	9-16-11 (2)	Redacted	9-15-11 1

PUT SCHEMATIC PIPING SKETCH ON BACK OF THIS SHEET

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RECORDS SECTION (WC), GMS&TS
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1 - ORIGINAL signed 6-21-11
2 - ORIGINAL signed 5-21-11

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