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 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
L-148	5	Stockton/Yosemite	41617948	02/24/2012

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

Test 1 – Hydrostatically test 8" & 6" isolation caps & tie-in assembly at Redacted

Hydrotest L-148 from Redacted Manteca & Modesto, CA (T-097-12) **REVISION 1: CHANGED NITROGEN TEST LOCATIONS**

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
2	.5	408 PSIG	720 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)			Static Head Calculation		
	Max. Elevation	Ft.	For Water	0.433 X Elev. Diff. =	0 PSIG
	Min. Elevation	Ft.	Other (Specify)	X Elev. Diff. =	PSIG
	Elev. Diff. 0	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.	
8.625	0.322	Pipe, API 5L, GR B, SMLS (Item #112)	8'-4"		15.61	26.56	30.23	2352
6.625	0.280	Pipe, API 5L, GR B, SMLS (Item #113)	6'		13.79	23.46	26.70	2663
8.625	0.322	Tee, Straight, GR B (Item #219)	1 Ea.		15.61	26.56	30.23	2352
6.625	0.280	Elbow, 45 Deg, GR B, LR (Item #221)	1 Ea.		13.79	23.46	26.70	2663
6.625	0.280	Elbow, 90 Deg, GR B, LR (Item #222)	1 Ea.		13.79	23.46	26.70	2663
8.625	0.322	Reducer 8x6, GR B (Item #139)	1 Ea.		15.61	26.56	30.23	2352
8.625	0.322	Cap, GR B (Item #163)	2 Ea.		15.61	26.56	30.23	2352
6.625	0.280	Cap, GR B (Item #164)	1 Ea.		13.79	23.46	26.70	2663
8.625	0.322	Valve, Ball, ANSI 300	1 Ea.		-	-	-	-

		Test Fluid To Be Used	MINIMUM TEST DURATION	
Minimum Test Pressure @ Max. Elevation	694 PSIG	WATER	- UNDER 30% SMYS (1 HR. MINIMUM)	1 HOUR
Maximum Test Pressure @ Min. Elevation	790 PSIG		- 30% SMYS & OVER (8 HRS. MINIMUM)	
			- PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)	

Redacted

For Information or Changes, Call: Mark Cabral (925) 588-3640

Approved By: Mark Cabral Date: 3-8-12

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		Elevation at Test Point	FT	Min. Required Test Press. At Test Point (1)	PSIG	Max. Allowable Test Press at Test Point (4)	PSIG
Time and Date Test Ended		Max. Elevation in Test Section	FT	Min. Indicated Test Pressure (2)	PSIG	Max. Indicated Test Pressure (5)	PSIG
Actual Duration of Test		Min. Elevation in Test Section	FT	Min. Test Pressure at Max. Elevation (3)	PSIG	Max. Test Pressure at Min. Elevation (6)	PSIG

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

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

Test Supervised By:	Date:	Approved By:	Date:

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

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 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
L-148	5	Stockton/Yosemite	41617948	02/24/2012

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

Test 2 – Test 8" L-148 underneath Redacted Existing material listed; i.e. pipe, elbows, sleeves, etc. are from the "Material of Record". (Refer to DWG 41617948 – Sheet 7)

* - Assumed values from PG&E Resolution of Unknown Pipeline Features and GS&S.

Hydrotest L-148 from Redacted Manteca & Modesto, CA (T-097-12) **REVISION 1: CHANGED NITROGEN TEST LOCATIONS**

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
2	.5	408 PSIG	720 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)			Static Head Calculation		
	Max. Elevation	32 Ft.	For Water	0.433 X Elev. Diff. =	PSIG
	Min. Elevation	27 Ft.	Other (Specify)	0.028 X Elev. Diff. = 0	PSIG
	Elev. Diff.	5 Ft.			

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.	
8.625	0.322	Pipe, API 5L, GR B, SMLS (Item #112)	2'		15.61	26.56	30.23	2352
8.625	0.312	Pipe, SMLS 24,000(assumed) (Item #2)	425'		23.50	39.97	45.50	1562
8.625	0.277	Pipe, API 5L GR B, SMLS (Item #3)	3228'		18.15	30.87	35.14	2023
4.500	0.148	Pipe, GR B (35,000) (Item #5)	10'		17.72	30.14	34.31	2072
1.050	0.113*	Pipe, GR 28000* (Item #7)	421'		6.77	11.52	13.11	5424
8.625	0.322	Cap, GR B (Item #163)	2 Ea.		15.61	26.56	30.23	2352
8.625	0.322	Elbow, GR B, LR (Item #4)	6 Ea.		15.61	26.56	30.23	2352

Minimum Test Pressure @ Max. Elevation	694 PSIG	Test Fluid To Be Used NITROGEN	MINIMUM TEST DURATION - 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	790 PSIG		1 HOUR

Redacted

For Information or Changes, Call: Mark Cabral (925) 588-3640

Approved By: Mark Cabral Date: 3-8-12

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		Elevation at Test Point	FT	Min. Required Test Press. At Test Point (1)	PSIG	Max. Allowable Test Press at Test Point (4)	PSIG
Time and Date Test Ended		Max. Elevation in Test Section	FT	Min. Indicated Test Pressure (2)	PSIG	Max. Indicated Test Pressure (5)	PSIG
Actual Duration of Test		Min. Elevation in Test Section	FT	Min. Test Pressure at Max. Elevation (3)	PSIG	Max. Test Pressure at Min. Elevation (6)	PSIG

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

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

Test Supervised By:	Date:	Approved By:	Date:

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

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 2

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-148	5	Stockton/Yosemite	41617948	02/24/2012

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

Test 3 – Test 8" L-148 from Redacted to the west of the western levee of the Redacted Existing material listed; i.e. pipe, elbows, sleeves, etc. are from the "Material of Record". (Refer to DWG 41617948 – Sheet 7)

Hydrotest L-148 from Redacted Manteca, CA (T-097-12) **REVISION 1: CHANGED NITROGEN TEST LOCATIONS**

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
2	.5	408 PSIG	720 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)			Static Head Calculation		
	Max. Elevation	36 Ft.	For Water	0.433 X Elev. Diff. =	5 PSIG
	Min. Elevation	25 Ft.	Other (Specify)	X Elev. Diff. =	PSIG
	Elev. Diff.	11 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.	
8.625	0.322	Pipe, API 5L, GR B, SMLS (Item #112)	19'		15.61	26.56	30.23	2352
8.625	0.322	Elbow, GR B, 90 Deg 3R (Item #128)	4 Ea.		15.61	26.56	30.23	2352

Minimum Test Pressure @ Max. Elevation	694 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)
Maximum Test Pressure @ Min. Elevation	790 PSIG		1 HOUR

Redacted	For Information or Changes, Call: Mark Cabral (925) 588-3640	Approved By: Mark J Cabral Date: 3-8-12

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		Elevation at Test Point	FT	Min. Required Test Press. At Test Point (1)	PSIG	Max. Allowable Test Press at Test Point (4)	PSIG
Time and Date Test Ended		Max. Elevation in Test Section	FT	Min. Indicated Test Pressure (2)	PSIG	Max. Indicated Test Pressure (5)	PSIG
Actual Duration of Test		Min. Elevation in Test Section	FT	Min. Test Pressure at Max. Elevation (3)	PSIG	Max. Test Pressure at Min. Elevation (6)	PSIG

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

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

Test Supervised By:	Date:	Approved By:	Date:

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

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 2 of 2

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-148	5	Stockton/Yosemite	41617948	02/24/2012

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

Test 3 – Test 8" L-148 from Redacted to the west of the western levee of the Redacted Existing material listed; i.e. pipe, elbows, sleeves, etc. are from the "Material of Record". (Refer to DWG 41617948 – Sheet 7)

* - Assumed values from PG&E Resolution of Unknown Pipeline Features and GS&S.

Hydrotest L-148 from Redacted Manteca, CA (T-097-12) **REVISION 1: CHANGED NITROGEN TEST LOCATIONS**

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
2	.5	408 PSIG	720 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)			Static Head Calculation		
	Max. Elevation	36 Ft.	For Water	0.433 X Elev. Diff. =	5 PSIG
	Min. Elevation	25 Ft.			
	Elev. Diff.	11 Ft.	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
8.625	0.277	Pipe, API 5L GR B, SMLS (Item #3)	8,229'		18.15	30.87	35.14	2023
1.315	0.133*	Pipe, GR 28000* (Item #6)	1'		7.20	12.25	13.95	5097
1.050	0.113*	Pipe, GR 28000* (Item #7)	53'		6.77	11.52	13.11	5424
0.840	0.147*	Pipe, GR 28000* (Item #8)	1'		4.16	7.08	8.06	8820
8.625	0.322	Elbow, GR B, LR (Item #4)	4 Ea.		15.61	26.56	30.23	2352

		Test Fluid To Be Used	MINIMUM TEST DURATION	
Minimum Test Pressure @ Max. Elevation	694 PSIG	WATER	- UNDER 30% SMYS (1 HR. MINIMUM)	1 HOUR
Maximum Test Pressure @ Min. Elevation	790 PSIG		- 30% SMYS & OVER (8 HRS. MINIMUM)	
			- PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)	

	For Information or Changes, Call:	Approved By:	Date:
Redacted	Mark Cabral (925) 588-3640	Mark Cabral	3-8-12

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		Elevation at Test Point	FT	Min. Required Test Press. At Test Point (1)	PSIG	Max. Allowable Test Press at Test Point (4)	PSIG
Time and Date Test Ended		Max. Elevation in Test Section	FT	Min. Indicated Test Pressure (2)	PSIG	Max. Indicated Test Pressure (5)	PSIG
Actual Duration of Test		Min. Elevation in Test Section	FT	Min. Test Pressure at Max. Elevation (3)	PSIG	Max. Test Pressure at Min. Elevation (6)	PSIG

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

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

Test Supervised By:	Date:	Approved By:	Date:

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

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 2

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-148	5	Stockton/Yosemite	41617948	02/24/2012

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

Test 4 – Test 8" L-148 from east of eastern levee o Redacted to MLV-6.06. Existing material listed; i.e. pipe, elbows, sleeves, etc. are from the "Material of Record". (Refer to DWG 41617948 – Sheet 7)

Hydrotest L-148 from Redacted Modesto, CA (T-097-12) **REVISION 1: CHANGED NITROGEN TEST LOCATIONS**

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
2	.5	408 PSIG	720 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)				Static Head Calculation		
	Max. Elevation	46	Ft.	For Water	0.433 X Elev. Diff. =	8 PSIG
	Min. Elevation	27	Ft.	Other (Specify)		X Elev. Diff. = PSIG
	Elev. Diff.	19	Ft.			

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.	
8.625	0.322	Pipe, API 5L, GR B, SMLS (Item #112)	36'		15.61	26.56	30.23	2352
4.500	0.237	Pipe, API 5L, GR B, SMLS (Item #114)	3' 8"		11.07	18.82	21.43	3318
1.050	0.154	Pipe, API 5L, GR B, SMLS (Item #115)	12'		3.97	6.76	7.69	9240
8.625	0.322	Elbow, GR B, 90 Deg 3R (Item #128)	4 Ea.		15.61	26.56	30.23	2352
1.050	0.154	Elbow, 45 Deg (Item #214)	6 Ea.		3.97	6.76	7.69	9240
8.625	0.322	Valve, Ball, ANSI 300, WE (Item #148)	1 Ea.		-	-	-	-
4.500	0.237	Valve, Ball, ANSI 300, FE (Item #150)	2 Ea.		-	-	-	-
8.625	0.322	Tee, Reducing, 8" x 4" Outlet Std. Wall, GR B (Item #211)	2 Ea.		15.61	26.56	30.23	2352

		Test Fluid To Be Used	MINIMUM TEST DURATION	
Minimum Test Pressure @ Max. Elevation	694 PSIG	WATER	- UNDER 30% SMYS (1 HR. MINIMUM)	1 HOUR
Maximum Test Pressure @ Min. Elevation	790 PSIG		- 30% SMYS & OVER (8 HRS. MINIMUM)	
			- PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)	

Redacted

For Information or Changes, Call: Mark Cabral (925) 588-3640

Approved By: Mark Cabral Date: 3-7-12

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		Elevation at Test Point	FT	Min. Required Test Press. At Test Point (1)	PSIG	Max. Allowable Test Press at Test Point (4)	PSIG
Time and Date Test Ended		Max. Elevation in Test Section	FT	Min. Indicated Test Pressure (2)	PSIG	Max. Indicated Test Pressure (5)	PSIG
Actual Duration of Test		Min. Elevation in Test Section	FT	Min. Test Pressure at Max. Elevation (3)	PSIG	Max. Test Pressure at Min. Elevation (6)	PSIG

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

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

Test Supervised By:	Date:	Approved By:	Date:

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

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 2 of 2

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-148	5	Stockton/Yosemite	41617948	02/24/2012

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

Test 4 – Test 8" L-148 from east of eastern levee of Redacted to MLV-6.06. Existing material listed; i.e. pipe, elbows, sleeves, etc. are from the "Material of Record". (Refer to DWG 41617948 – Sheet 7)

Hydrotest L-148 from Redacted Modesto, CA (T-097-12) **REVISION 1: CHANGED NITROGEN TEST LOCATIONS**

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
2	.5	408 PSIG	720 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)			Static Head Calculation		
	Max. Elevation	46 Ft.	For Water	0.433 X Elev. Diff. =	8 PSIG
	Min. Elevation	27 Ft.	Other (Specify)	X Elev. Diff. =	PSIG
	Elev. Diff.	19 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.	
8.625	0.322	Pipe, API 5L, GR B, SMLS (Item #1)	53'		15.61	26.56	30.23	2352
8.625	0.277	Pipe, API 5L, GR B, SMLS (Item #3)	20,012'		18.15	30.87	35.14	2023

		Test Fluid To Be Used	MINIMUM TEST DURATION	
Minimum Test Pressure @ Max. Elevation	694 PSIG	WATER	- UNDER 30% SMYS (1 HR. MINIMUM)	1 HOUR
Maximum Test Pressure @ Min. Elevation	790 PSIG		- 30% SMYS & OVER (8 HRS. MINIMUM)	
			- PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)	

Redacted

nformation or Changes, Call: rk Cabral (925) 588-3640

Approved By: Mark Cabral Date: 3-7-12

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		Elevation at Test Point	FT	Min. Required Test Press. At Test Point (1)	PSIG	Max. Allowable Test Press at Test Point (4)	PSIG
Time and Date Test Ended		Max. Elevation in Test Section	FT	Min. Indicated Test Pressure (2)	PSIG	Max. Indicated Test Pressure (5)	PSIG
Actual Duration of Test		Min. Elevation in Test Section	FT	Min. Test Pressure at Max. Elevation (3)	PSIG	Max. Test Pressure at Min. Elevation (6)	PSIG

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

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

Test Supervised By:	Date:	Approved By:	Date:

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