



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-31 and GD 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 | |
| 0211-01 | | 1 | | Peninsula | | 41598529 | | 10/25/11 | |
| Description of Job - Include Reference Drawing Numbers, and Pipeline Mileposts | | | | | | | | | |
| Test 1 - Test tie-in pieces, temporary piping and existing 6" & 8" L-0211-01. Existing pipeline material listed; ie. Pipe, elbows, sleeves are from the "Material of Record" (refer to Drawing 41598529, sheet 3 of 3) | | | | | | | | | |
| Strength test 0211-01 from MP 0.02 - 0.68 Burlingame, CA (Test section 122) | | | | | | | | | |
| 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 | | N/A Ft. | | Static Head Calculation | | | |
| | | Min. Elevation | | N/A Ft. | | For Water 0.433 X Elev. Diff. = _____ PSIG | | | |
| | | Elev. Diff. | | 46 Ft. | | Other (Specify) 0.026 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. | W.T. | API or ASTM Grade Long Seam (ERW, DSAW, Seamless, Etc.) | | | At MAOP | At Min. Test Press. | At Max. Test Press. | | |
| 6.625 | 0.280 | Pipe, API 5L GR B, SMLS (item #113) | 9' | 11" JS | 13.52 | 20.28 | 23.32 | 2663 | |
| 6.625 | 0.280 | Elbow, GR B (item #129) | 1 Ea. | JS | 13.52 | 20.28 | 23.32 | 2663 | |
| 2.375 | 0.154 | Pipe, API 5L GR B, SMLS (item #116) | 8' | 2.5" JS | 8.81 | 13.22 | 15.20 | 4085 | |
| 8.625 | 0.172 | Pipe, GR B, SMLS (item #1) | 387' | MOR | 28.65 | 42.98 | 49.43 | 1256 | |
| 8.625 | 0.219 | Pipe, GR B, SMLS (item #2) | 2214' | MOR | 22.50 | 33.76 | 38.82 | 1600 | |
| 8.625 | 0.188 | Pipe, GR B, SMLS (item #3) | 237' | MOR | 26.22 | 39.32 | 45.22 | 1373 | |
| 8.625 | 0.219 | Pipe, API 5L X-42, ERW (item #4) | 650' | MOR | 18.75 | 28.13 | 32.35 | 1920 | |
| 8.625 | 0.172 | Pipe, API 5L X-42, ERW (item #5) | 147' | MOR | 23.88 | 35.82 | 41.19 | 1508 | |
| 8.625 | 0.188 | Pipe, API 5L X-42, ERW (item #6) | 117' | MOR | 21.85 | 32.77 | 37.69 | 1648 | |
| 8.625 | 0.322 | Elbow, GR B (item #7) | 12 Ea. | MOR | 15.31 | 22.96 | 26.40 | 2352 | |
| 8.625 | 0.219 | Elbow, GR B (item #8) | 15 Ea. | MOR | 22.50 | 33.76 | 38.82 | 1600 | |
| Minimum Test Pressure @ Max. Elevation | | 600 PSIG | | Test Fluid To Be Used | | MINIMUM TEST DURATION | | 1 HOURS | |
| Maximum Test Pressure @ Min. Elevation | | 690 PSIG | | NITROGEN | | - UNDER 30% SMYS (1 HR. MINIMUM) | | | |
| | | | | | | - 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 | | 10/25/11 | | Mark Cabral (925) 588-3640 | | Mark Cabral | | 10-26-11 | |
| 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 | | 5:45 PM 10/29/2011 | | Elevation at Test Point | | -7 FT | | Min. Required Test Press. At Test Point (1) | |
| | | | | | | | | 600 PSIG | |
| Time and Date Test Ended | | 8:15 PM 10/29/2011 | | Max. Elevation in Test Section | | 33 FT | | Min. Indicated Test Pressure (2) | |
| | | | | | | | | 629 PSIG | |
| Actual Duration of Test | | 2 hr. 30 min | | Min. Elevation in Test Section | | -13 FT | | Min. Test Pressure at Max. Elevation (3) | |
| | | | | | | | | 628 PSIG | |
| Test Fluid Used | | NITROGEN | | 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 | | | |
| Bristol 66W-835 0-2000psi | | 9-1-2011 | | Chandler, 26401, 50-5000psi | | 7-7-2011 | | | |
| Test Supervised By | | Date: | | Approved By: | | Date: | | | |
| Redacted | | 10/29/2011 | | Joe Penner | | 10/31/11 | | | |
| PUT SCHEMATIC OF 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: | | | | | DISTRIBUTION | | | | |
| (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. | | | | | JOB FILE (AT SPONSORING ORGANIZATION) | | | | |
| (2) Use lowest pressure on test gauge at any time during test. | | | | | CSM&TS RESPONSIBLE DISTRICT SUPERINTENDENT | | | | |
| (3) Subtract static head due to elevation difference (between test point and maximum elevation) from minimum indicated test pressure. | | | | | PROJECT MANAGER/PROJECT ENGINEER | | | | |
| (4) Subtract static head due to elevation difference (between test point and minimum elevation) from "maximum test pressure at minimum elevation" from PART I. | | | | | TECHNICAL & CONSTRUCTION SERVICES - ASSIGNED JOBS ONLY | | | | |
| (5) Highest pressure on test gauge at any time during test. | | | | | CAPITAL ACCOUNTING (FOREMAN'S COPY OF JOB) | | | | |
| (6) Add static head due to elevation difference (between test point and minimum elevation) to maximum indicated test pressure. | | | | | RECORDS SECTION (WC), GMS&TS | | | | |
| (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. | | | | | REPORT FAILURES UNDER TEST TO GAS ENGINEERING & PLANNING | | | | |



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

| | | | | |
|---|------------------|---------------------------------------|-------------------------------|--|
| Feeder/Main Number, Line Number, or Station Name 0211-01 | Area 1 | Division/District Peninsula | Job Number 41598529 | Date Job Authorized 10/25/11 |
| Description of Job -- Include Reference Drawing Numbers, and Pipeline Mileposts Test 1 -- Test tie-in pieces, temporary piping and existing 6" & 8" L-0211-01. Existing pipeline material listed; ie. Pipe, elbows, sleeves are from the "Material of Record" (refer to Drawing 41598529, sheet 3 of 3) | | | | |
| Strength test 0211-01 from MP 0.02 - 0.68 Burlingame, CA (Test section 122) | | | | |

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

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|--|----------------------------------|-------------------------|--|
| STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE) | Max. Elevation N/A Ft. | Static Head Calculation | 0.433 X Elev. Diff. = _____ PSIG |
| | Min. Elevation N/A Ft. | For Water | |
| | Elev. Diff. 46 Ft. | Other (Specify) | 0.026 X Elev. Diff. = 1 PSIG |

| Size | | Pipe Specification | | Foolage to Be Tested | Pipe Spec. and Foolage Verified in Field | % of SMYS | | | Pressure to Give 90% SMYS |
|-----------------|-----------------|--------------------|---------------------------------------|----------------------|--|-----------|---------------------|---------------------|---------------------------|
| O.D. | W.T. | API or ASTM Grade | Long Seam (ERW, DSAW, Seamless, Etc.) | | | At MAOP | At Min. Test Press. | At Max. Test Press. | |
| 2.375 | 0.154 | Pipe, GR B, SMLS | (item #9) | 65' | MOR | 8.81 | 13.22 | 15.20 | 4085 |
| 8.625 | 0.322 | Tee, GR B | (item #10) | 2 Ea. | MOR | 15.31 | 22.96 | 26.40 | 2352 |
| 8.625 | 0.219 | Tee, GR B | (item #11) | 1 Ea. | MOR | 22.50 | 33.76 | 38.82 | 1600 |
| 8.625 | - | Valve, ANSI 300 | (item #13) | 2 Ea. | MOR | - | - | - | - |
| 6.625 | 0.280 | Pipe, GR B, SMLS | (item #14) | 13' | MOR | 13.52 | 20.28 | 23.32 | 2663 |
| 6.625 | 0.280 | Elbow, GR B | (item #15) | 1 Ea. | MOR | 13.52 | 20.28 | 23.32 | 2663 |
| 6.625x 8.625 | 0.280x 0.322 | Reducer, GR B | (item #16) | 1 Ea. | MOR | 15.31 | 22.96 | 26.40 | 2352 |

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| Minimum Test Pressure @ Max. Elevation 600 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) | 1 HOURS |
| Maximum Test Pressure @ Min. Elevation 690 PSIG | Prepared By: Redacted | Date: 10/25/11 | Approved By: Mark Cabral |
| | For Information or Changes, Call: Mark Cabral (925) 588-3640 | | Date: 10-26-11 |

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

| | | | | |
|---|---|---|--|--|
| Time and Date Test Pressure Reached 5:45 pm 10/29/2011 | | Elevation at Test Point -7 FT | M'n. Required Test Press. At Test Point (1) 617 PSIG | Max. Allowable Test Press at Test Point (4) 687 PSIG |
| Time and Date Test Ended 8:15 pm 10/29/2011 | | Max. Elevation in Test Section 33 FT | M'n. Indicated Test Pressure (2) 629 PSIG | Max. Indicated Test Pressure (5) 667 PSIG |
| Actual Duration of Test 2 hr. 30 min | | Min. Elevation in Test Section -13 FT | Min. Test Pressure at Max. Elevation (3) 628 PSIG | Max. Test Pressure at Min. Elevation (6) 667 PSIG |
| Test Fluid Used NITROGEN | | Redacted | | |
| Make, Range, and Serial No. of Pressure Recording Gauge Bristol 166W-835, 0-2000psi | Date Last Calibrated 9-1-2011 | Make, Range, and Serial No. of Dead Weight Tester (See Note 7) Chandler, 26401, 50-5000 psi | Date Last Calibrated 7-7-2011 | |
| Test Supervisor Redacted | Date: 10/29/2011 | Approved By: Colt A. Bonnie | Date: 10-31-11 | |

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.

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| <p>NOTES:</p> <ol style="list-style-type: none"> Add the static head due to elevation difference (between test point and maximum elevation) to "minimum test pressure at maximum elevation" from PART I. Use lowest pressure on test gauge at any time during test. Subtract static head due to elevation difference (between test point and maximum elevation) from minimum indicated test pressure. Subtract static head due to elevation difference (between test point and minimum elevation) from "maximum test pressure at minimum elevation" from PART I. Highest pressure on test gauge at any time during test. Add static head due to elevation difference (between test point and minimum elevation) to maximum indicated test pressure. 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. | <p>DISTRIBUTION</p> <p>JOB FILE (AT SPONSORING ORGANIZATION)</p> <p>GSM&TS RESPONSIBLE DISTRICT SUPERINTENDENT</p> <p>PROJECT MANAGER/PROJECT ENGINEER</p> <p>TECHNICAL & CONSTRUCTION SERVICES - ASSIGNED JOBS ONLY</p> <p>CAPITAL ACCOUNTING (FOREMAN'S COPY OF JOB)</p> <p>RECORDS SECTION (WC), GSM&TS</p> <p>REPORT FAILURES UNDER TEST TO GAS ENGINEERING & PLANNING</p> |
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