



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 L-105A | Area 2 | Division/District East Bay | Job Number 41474064 | Date Job Authorized August 25, 2011 |
| Description of Job -- Include Reference Drawing Numbers, and Pipeline Mileposts TEST 4 -- Hydrostatically test tie-in pieces, hydrostatic test piping and existing 30" L-105A. Existing pipeline material listed; ie. pipe, elbows, sleeves, are from the "Material of Record" (refer to Dwg 41474064, sheet 9 of 9) REVISION 1 -- Revised pipe grade of item#1 to GR B. | | | | |
| Hydrotest L-105A from MP 38.00 to 41.00 Berkeley, Emeryville & Oakland, CA (Test Section 07) T 7 | | | | |
| Location Class 3 | Design Factor (F) .5 | MAOP to be Established for this Piping by this Test 198 PSIG | Future Design Pressure 275 PSIG | |
| STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE) | Max. Elevation 38 Ft. | Static Head Calculation | For Water 0.433 X Elev. Diff. = 13 PSIG | |
| | Min. Elevation 8 Ft. | Other (Specify) | X Elev. Diff. = PSIG | |
| | Elev. Diff. 30 Ft. | | | |

| 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. | |
| 30.00 | .375 | Pipe, API 5L X-65, DSAW (item#103) | 86' 6" | 96'-11 1/2" | 12.18 | 20.74 | 25.23 | 1463 |
| 30.00 | 0.3125 | Pipe, API 5L GR B, DSAW (item#1) | 1114' | MOR | 27.15 | 46.22 | 56.23 | 656 |
| 30.00 | 0.375 | Elbow, LR, Y-60 90° (item#120) | 8 Ea. | 7 JL | 13.20 | 22.47 | 27.33 | 1350 |
| 30.00 | 0.375 | Elbow, LR, GR B (item#4) | 43 Ea. | MOR | 22.63 | 38.51 | 46.86 | 788 |
| 30.00 | UNK | Elbow, LR, GR Unknown (item#5) | 6 Ea. | MOR | ---- | ---- | ---- | ---- |
| 6.625 | .280 | Pipe, API 5L GR B, SMLS (item#113) | 8 | 13'-5 1/2" | 6.69 | 11.39 | 13.86 | 2663 |
| 6.625 | .280 | Elbow, LR, 90 deg, GR B (item#219) | 1 Ea. | 2 JL | 6.69 | 11.39 | 13.86 | 2663 |
| 6.625 | .280 | Valve, Ball, ANSI 300 (item#217) | 1 Ea. | - JL | ---- | ---- | ---- | ---- |
| 30.00 | .375 | Elbow Y60 45° | 1 ea | - JL | 13.20 | 22.47 | 27.33 | 1350 |

| | | | |
|---|---------------------------------------|---|----------------|
| Minimum Test Pressure @ Max. Elevation 337 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 410 PSIG | | | |

Redacted Date: **9/28/11** For Information or Changes, Call: **Mark Cabral (925) 588-3640** Approved By: **Mark Cabral** Date: **9-28-11**

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

TEST CONDUCTED BY **THOR VAN BOXTEL CCF** Note: Minimum test pressure and duration are not to be changed without written approval.

| | | | |
|---|--|---|---|
| Time and Date Test Pressure Reached 9:25 AM 9-29-11 | Elevation at Test Point 22 FT | Min. Required Test Press. At Test Point (1) 343.93 PSIG | Max. Allowable Test Press at Test Point (4) 403.93 PSIG |
| Time and Date Test Ended 6:00 PM 9-29-11 | Max. Elevation in Test Section 38 FT | Min. Indicated Test Pressure (2) 360.00 PSIG | Max. Indicated Test Pressure (5) 395.00 PSIG |
| Actual Duration of Test 8 HR 35 min | Min. Elevation in Test Section 8 FT | Min. Test Pressure at Max. Elevation (3) 353.07 PSIG | Max. Test Pressure at Min. Elevation (6) 401.07 PSIG |

Test Fluid Used **WATER** Pipe Specification and Footage Verified (See Part I) **JL A639**

| | | | |
|---|---------------------------------------|--|---------------------------------------|
| Make, Range, and Serial No. of Pressure Recording Gauge CLP, 0-500 PSI 1703 | Date Last Calibrated 5-2-11 | Make, Range, and Serial No. of Dead Weight Tester (See Note 7) AMETEK, 10-3000 PSI HL-6301 | Date Last Calibrated 6-7-11 |
|---|---------------------------------------|--|---------------------------------------|

Test Supervised By **Redacted** Date: **9-29-11** **Redacted** Date: **11-29-11**

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), GSM&TS
 - REPORT FAILURES UNDER TEST TO GAS ENGINEERING & PLANNING

FINAL



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 California Gas Transmission
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Sheet 2 of 2

| PART I - DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER) | | | | | | | | | | |
|---|--|------------------------------------|---------------------------------------|--|---|--|---|---|---|----------------|
| Feeder Main Number, Line Number, or Station Name L-105A | | Area 2 | | Division/District East Bay | | | Job Number 41474064 | | Date Job Authorized August 25, 2011 | |
| Description of Job -- Include Reference Drawing Numbers, and Pipeline Mileposts TEST 4 -- Hydrostatically test tie-in pieces, hydrostatic test piping and existing 30" L-105A. Existing pipeline material listed; ie. pipe, elbows, sleeves, are from the "Material of Record" (refer to Dwg 41474064, sheet 9 of 9) REVISION 1 -- Revised pipe grade of item#1 to GR B. | | | | | | | | | | |
| Hydrotest L-105A from MP 38.00 to 41.00 Berkeley, Emeryville & Oakland, CA (Test Section 07) T7 | | | | | | | | | | |
| Location Class 3 | | Design Factor (F) .5 | | MAOP to be Established for this Piping by this Test 198 PSIG | | | Future Design Pressure 275 PSIG | | | |
| STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE) | | Max. Elevation 38 Ft. | | Static Head Calculation | | | For Water 0.433 X Elev. Diff. = 13 PSIG | | | |
| | | Min. Elevation 8 Ft. | | Other (Specify) | | | X Elev. Diff. = PSIG | | | |
| | | Elev. Diff. 30 Ft. | | | | | | | | |
| Pipe Specification | | | | Footage to Be Tested | Pipe Spec. and Footage Verified In Field | % of SMYS | | | Pressure to Give 90% SMYS | |
| Size | API or ASTM Grade Long Seam (ERW, DSAW, Seamless, Etc.) | | | | | At MAOP | At Min. Test Press. | At Max. Test Press. | | |
| O.D. | W.T. | | | | | | | | | |
| 4.50 | .237 | Pipe, API 5L GR B, SMLS (item#114) | | | 1 | Ø JL | 5.37 | 9.14 | 11.12 | 3318 |
| 4.50 | .237 | Pipe, API 5L GR B, SMLS (item#14) | | | 5 | 5'-10" JL | 5.37 | 9.14 | 11.12 | 3318 |
| 3.50 | .216 | Pipe, API 5L GR B, SMLS (item#115) | | | 4 | 0'-6" JL | 4.58 | 7.80 | 9.49 | 3888 |
| 3.50 | .216 | Pipe, API 5L GR B, SMLS (item#15) | | | 4 | 10'-3" JL | 4.58 | 7.80 | 9.49 | 3888 |
| 2.375 | .154 | Pipe, API 5L GR B, SMLS (item#16) | | | 75' | MOR | 4.36 | 7.42 | 9.03 | 4085 |
| 1.05 | .113 | Pipe, API 5L GR B, SMLS (item#17) | | | 104' | MOR | 2.63 | 4.47 | 5.44 | 6780 |
| Minimum Test Pressure @ Max. Elevation | | | | 337 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 | | | | 410 PSIG | | | | | | |
| Redacted | | Date: 9/28/11 | | For Information or Changes, Call: Mark Cabral (925) 588-3640 | | | Approved By: <i>Mark Cabral</i> | | Date: 9-28-11 | |
| 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 BOXTEL CCF | | | | | | | | | | |
| Time and Date Test Pressure Reached | | 9:25 AM 9-29-11 | | Elevation at Test Point 22 FT | | Min. Required Test Press. At Test Point (1) 343.93 PSIG | | Max. Allowable Test Press at Test Point (4) 403.93 PSIG | | |
| Time and Date Test Ended | | 6:00 PM 9-29-11 | | Max. Elevation in Test Section 38 FT | | Min. Indicated Test Pressure (2) 360.00 PSIG | | Max. Indicated Test Pressure (5) 395.00 PSIG | | |
| Actual Duration of Test | | 8 Hrs 35 min | | Min. Elevation in Test Section 8 FT | | Min. Test Pressure at Max. Elevation (3) 353.07 PSIG | | Max. Test Pressure at Min. Elevation (6) 401.07 PSIG | | |
| Test Fluid Used WATER | | | | Pipe Specification and Footage Verified (See Part I) JLA639 | | | | | | |
| Make, Range, and Serial No. of Pressure Recording Gauge CLP 0-500 psi 1703 | | | Date Last Calibrated 5-2-11 | | Make, Range, and Serial No. of Dead Weight Tester (See Note 7) Redacted | | | Date Last Calibrated 6-7-11 | | |
| Test Supervised Redacted | | | Date: 9-29-11 | | Redacted | | | Date: 11-29-11 | | |
| 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: | | | | | 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. | | | | | GSM&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), GSM&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 | | | | | |

FINAL