

PACIFIC GAS AND ELECTRIC COMPANY  
STANDARD PRACTICE

# 01 *WOB*

STANDARD PRACTICE NO. 463-8

EXECUTIVE OFFICE OR DIVISION GAS OPERATIONS

PAGE NO 1 EFFECTIVE 4/15/70

ISSUING DEPARTMENT GAS SYSTEM DESIGN

REPLACING PAGE NO. EFFECTIVE

SUBJECT: MAXIMUM OPERATING PRESSURES OF PIPELINES AND MAINS  
OPERATING AT OR ABOVE 20% OF S.M.Y.S.

PURPOSE AND POLICY

1. To establish a uniform procedure for identifying, reviewing and revising Design Pressure (D.P.), Maximum Allowable Operating Pressures (MAOP), and Maximum Operating Pressures (MOP) (PG&E) for all pipelines and mains operating at or above 20% of specified minimum yield strength (SMYS) of the pipe material (See Appendixes A and B)

RESCISSIONS

2. All previous instructions, oral or written, that may be contrary to this Standard Practice.

RESPONSIBILITY

3. Division Gas Superintendents and the Manager of Pipe Line Operations shall be responsible for the performance required by this Standard Practice. Performance will include reviews of design procedures for the lines and the records generated by the referenced Standard Practices at any time a change in MOP, MAOP or DP is contemplated.
4. The Manager of Gas System Design will establish and confirm changes to MOP, MAOP and DP.

REFERENCES

5. G.O. 112-B - California Public Utilities Commission  
S.P. 412-1, "External Corrosion Control of Buried Gas Facilities"  
S.P. 460-1, "Location Class, Changes In"  
S.P. 460.2-2, "Physical Inspection: Pipelines, Mains and Services"  
S.P. 460.21-4, "Gas Leakage, Routine Inspection for"  
S.P. 463.7, "Pipeline and Main History File, History and Maintaining"

DEFINITIONS

6. Design Pressure (DP) is the maximum pressure permitted by the design procedures of G.O. 112-B applicable to the materials and locations involved. In some cases the DP has been established as the maximum pressure for the minimum wall thickness required under G.O. 112-B for Type C construction for line size listed (See double asterisk Appendix A).

Maximum Allowable Operating Pressure (MAOP) is the maximum operating pressure at which a gas system may be operated in accordance with all the applicable provisions of G.O. 112-B.

(SEE OVER)

PACIFIC GAS AND ELECTRIC COMPANY  
**STANDARD PRACTICE**

STANDARD PRACTICE NO. 463-8

EXECUTIVE OFFICE OR DIVISION GAS OPERATIONS

PAGE NO 2 EFFECTIVE 4/15/70

ISSUING DEPARTMENT GAS SYSTEM DESIGN

REPLACING PAGE NO \_\_\_\_\_ EFFECTIVE \_\_\_\_\_

**SUBJECT:** MAXIMUM OPERATING PRESSURES OF PIPELINES AND MAINS OPERATING AT OR ABOVE 20% OF S.M.Y.S.

DEFINITIONS

Maximum Operating Pressure (MOP) (PG&E) is the maximum pressure at which a gas system may be operated as specified by the Manager of the Gas System Design Department.

Specified Minimum Yield Strength (SMYS) is the minimum yield strength in psi prescribed by the specification under which pipe is purchased from the manufacturer.

APPLICATION

7. Procedural details and supplemental data appear in addenda to this Standard Practice.

- Supplement - Procedural Details
- Appendix A - Lines in Transmission Capital Operating at or over 20% of SMYS
- Appendix B - Distribution Mains Operating at or above 20% of SMYS

RECORD

8. Pressure Recording Charts and Operating Sheets(record of hourly data) which document the MOPs of pipelines and mains operating at or above 20% of SMYS shall be kept current by the Division and/or Pipeline Operations Department assigned with the responsibility of maintenance and operation of facility.

SUPPLEMENT

9. The Supplement establishes the procedure for designating the MOP (PG&E), MAOP and DP for each facility.

APPROVED BY: E. H. Fisher  
Vice President - Gas Operations

<u>DISTRIBUTION:</u> Division Managers	Division Admin. Analyst or Equal
Division Gas Supts.	District Gas Supts. or Equal
District Gas Supts.	Director, Procedures Analysis
District Managers	Pipe Line Operations Dept.

Additional copies of this Standard Practice may be obtained from Gas Operations, 245 Market Street, San Francisco (PG&E Ext. 9-1604).

PROCEDURAL DETAILS

10. Piping systems listed are not to be operated in excess of MOP (PG&E). This limitation has been determined by either:
  - a. The test pressure and rated working pressure of the pipe, valves, and fittings in the line, or
  - b. Operating conditions that limit pressure.
11. The MOP may equal, but never exceed DP. In some cases where MAOP is less than DP, it is anticipated that the MAOP may be increased at some future period. For this reason, all new additions to an existing system shall have a design pressure at least equal to the design pressure listed in Appendixes A and B. Sections of an existing system may not qualify for the established design pressure and would require reconstruction prior to upgrading the MAOP. See Section 6.
12. Any changes contemplated in the MOP (PG&E) of a line operating at or over 20% of SMYS shall be submitted by Division Gas Superintendent or Manager of Pipe Line Operations, in letter form, to the Manager of Gas System Design for review and approval.
13. The MOP (PG&E), MAOP and DP of all newly installed pipelines and mains operating at or above 20% of SMYS, along with those in Appendixes A and B shall be confirmed annually by letter on or before February 1 by Division Gas Superintendents and Manager of Pipe Line Operations to the Manager of Gas System Design Department for each facility within the scope of this Standard Practice.
14. Annually the Manager of Gas System Design Department will publish and distribute updated lists of pipeline pressures (Appendixes A and B).

Attachment: Appendix A - "Lines in Transmission Capital Operating at or over 20% of SMYS"

Appendix B - "Distribution Mains Operating at or above 20% of SMYS"

4-15-70

LINES IN TRANSMISSION CAPITAL OPERATING  
AT OR OVER 20% OF SMYS

Trans. Line No.	Designation	Nominal Pipe Dia. (Inches)	PG&E MOP PSI	MAOP	Design Press.
21	Crockett Station (MP 0.00) to MP 0.54	24" & 26"	400	560	650
21	MP 0.54 to Herrmann Station (MP 1.52)	24"	400	675	675
21	Herrmann Station to Reis Ave (MP 2.71)	16"	300	300	575**
21	Reis Ave to Napa Y (MP 12.05)	12"	375	375	585
21	Napa Y to MP 35.05	12"	450	450	675
21	MP 35.05 to MP 51.41	12"	450	720	720
21	MP 51.41 to Santa Rosa Comp Sta (MP 52.88)	12"	450	890	890
21	MP 52.88 to MP 110.4	12"	720	890	890
21	MP 110.4 to MP 111.2	12"	720	720	890
21	MP 111.2 to MP 111.9	12"	720	890	890
21	MP 111.9 to MP 112.1	12"	720	720	890
21	MP 112.1 to MP 113.9	12"	720	890	890
21	MP 113.9 to MP 114.9	12"	720	720	890
21	Napa Y (MP 0.00) to MP 18.64	16"	500	720	720
21	MP 18.64 to Denman Flat Tap (MP 24.60)	16"	450	720	720
21	McDowell Road Tap (MP34.84) to Petaluma Mtr Sta (MP35.86)	12"	450	450	593
21	Adobe (MP0.00) to San Rafael HPU Holder Station	16"	450	600	600
*50	5th & Walnut Sts Marysville (MP0.00) to Yuba City HPU Holder Station (MP2.87)	8"	400	400	720**
*50	Yuba City HPU Holder Sta to Biggs Reg Sta (Hazel St) (MP21.62)	8"	250	250	720**
*50	Biggs Reg Sta to Stirling Jct (MP44.87)	6" & 8"	400	400	720**
55	Line 50 (MP0.00) to Paradise (MP7.81)	8"	400	720	720
56	Pleasant Creek Field Storage System	4"	1250	1250	1250
57	McDonald Island Field Storage System	4" - 12"	2000	2000	2160
57	McDonald Island Comp Sta (MP0.00) to PLS (MP7.47)	14"16"18"	1025	1025	1025
57	PLS MP7.47 to Brentwood Terminal (MP16.64)	18"	867	867	867
100	MP57.3 to MP134.50	20"	350	350	500
100	MP134.50 to Milpitas Terminal (MP150.13)	20"	400	400	552
101	Milpitas Terminal (MP0.00) to Rengstorff Ave. Station (MP9.80)	36"	400	400	400
*101	Rengstorff Ave Sta via Bayshore Blvd to S.F. Border Mtr Sta near Lomita Park (MP33.68)	20"	250	250	400
*101	S.F. Border Mtr Sta near Lomita Park via Bayshore Blvd to Potrero Gas Plant (MP44.56)	20"	150	150	275
*103	Hollister Mtr Sta (MP0.00) to Harkins Rd Mtr & Mxr Station (MP26.63)	12"	350	350	670**

\*\*SEE PAR. 6

(see over)

Trans. Line No.	Designation	Nominal Pipe Dia. (Inches)	PG&E MOP PSI	MAOP	Design Pressure
105	Irvington Sta (MP6.88) to San Lorenzo Reg Sta (MP23.03)	20"	250	250	500
*105	San Lorenzo Reg. Sta to San Pablo Sta (MP52.01)	20"	150	150	275
*105	Oakland Holder Sta (MP0.00) to Berkeley City Limits (parallel) (MP2.03)	24"	150	150	275
105	Baine Ave Crossover (MP0.00) to Line 153 (MP0.185)	20"	250	590	590
*105	West Winton Ave Crossover (MP0.00) Line 153 (MP1.285)	22" & 24"	250	375	500
105B	Crockett Sta (MP0.00) to San Pablo Sta (MP11.85)	24"	400	400	400
105S	Milpitas Terminal (MP0.00) to Irvington Sta (MP6.88)	20"	472	500	500
107	Tracy Sta (MP0.00) to Livermore Jct (MP13.11)	22"	500	500	500
107	Livermore Jct to Irvington Sta (MP31.22)	22"	477	477	500
107S	Irvington Sta to Milpitas Terminal (MP38.06)	22"	500	500	500
108	Stanpac 2 (MP0.00) to Vernalis Field Mixing Sta (MP4.59)	16"	490	490	720
108	Vernalis Field Mixing Sta to Las Vinas Sta (MP43.5)	16"	412	412	720**
108	Las Vinas Sta to MP56.25	16"	490	490	720
108	MP56.25 to Sacramento Gas Plt (MP75.10)	16"	412	412	720
*108	E. Hazelton & B Sts Reg Sta MP27.1 to Stockton Gas Plant (MP1.71)	12"	200	200	275
109	Milpitas Terminal (MP0.00) to Sullivan Ave Reg Sta (MP43.47)	22" & 30"	375	375	400
*109	Sullivan Ave Reg Sta to Potrero Gas Plant (MP52.70)	26"	150	150	275
111	Helm Jct (MP0.00) to Fresno Jct (MP21.65)	12"	668	668	800
111	Fresno Jct to Div. Gas Load Center (MP28.05)	8"	400	400	720
111	Raisin City Field Collection System	4"	668	668	800
111	San Joaquin Field Collection System	3" & 4"	800	800	960
112	Vernalis Field Collection System	3" - 8"	800	800	800
114	West Rio Vista Field (MP0.00) to Antioch Terminal (MP9.01)	12" & 16"	800	800	800
114	Antioch Terminal to Brentwood Terminal (MP16.59)	22"	595	595	595
114	Brentwood Terminal to Dalton Ave PLS (MP28.97)	22"	595	595	595
114	Dalton Ave PLS to Livermore Jct (MP34.05)	22"	500	500	595
*116	Davis Mtr Sta (MP0.00) to Sacramento Gas Plant (MP12.89)	8"	500	500	720
*118	Div. Gas Load Center (MP0.00) to Fresno Jct (MP6.09)	8"	400	400	720
*118	Fresno Jct to MP12.57	12"	400	500	720
*118	MP12.57 to Livingston (MP73.26)	8"	400	400	720
118	Herndon MP0.00 to Athlone MP38.39	12"	400	720	720
119	Davis Mtr Sta (MP0.00) to No. Sacramento HPU Sta (MP16.46)	10" & 12"	800	800	800
119	No. Sacramento HPU Sta (MP0.00) to Antelope Mtr Sta (MP10.17)	12"	500	500	545
119	No. Sacramento HPU Sta (MP0.00) to Antelope Mtr Sta (MP8.41)	16" & 6"	500	500	545

\*\*SEE PAR. 6

Trans. Line No.	Designation	Nominal Pipe Dia. (Inches)	PG&E		Design Press.
			MOP PSI	MAOP	
119	No. Sacramento HPU Sta (MPO.00) to (MP2.80)	24"	500	545	545
119	Elm & Traction Ave Reg Sta (MP4.60 to MP5.50)	12"	500	500	545
119	Sonoma Ave. Reg Sta & Del Paso Blvd (MPO.00) to Roseville Reg Sta (MP5.25)	6"	500	500	545
120	Sutter Creek Field Collection System	4" & 6"	600	600	720
120	Sutter Buttes Field Collection System	4" & 6"	600	600	720
121	Marysville Buttes Mtr Sta (MPO.00) to Yuba City HPU Sta (MP11.54)	6"	500	500	720
123	Antelope Mtr Sta (MPO.00) to Lincoln Jct (MP13.57)	12"	500	500	670**
124	Lincoln Jct (MPO.00) to 5th & Walnut Sts, Marysville (MP23.46)	8"	500	500	720
124	Lincoln Jct (MPO.00) to Yuba City HPU Sta (MP26.03)	16"	600	600	600
124	Beale Air Force Base Tap (MPO.00)-(T-13.31) to (MP3.76)	6"	600	600	720
125	Tompkins Hill Field Collection System	3" 4" 6"	500	500	720
126	Tompkins Hill Mtr Sta (MPO.00) to Union St Reg Sta (MP10.57)	4"	500	500	720
126	Tompkins Hill Mtr Sta (MPO.00) to Union St Reg Sta Line 137 (MP12.61)	6"	500	500	720
126	Elk River Rd Reg Sta (MPO.00) to MP 3.62 (T12.38 Line 126)	10"	500	500	720
*126	MPO.00 (T12.22 Line 126) to Eureka Propane Plant (MPO.36)	10"	500	500	720
130	Rio Vista Field (Sacto River Crossing) (MPO.00 to MPO.50)	10"	800	800	800
131	E. Rio Vista Field (MPO.00 to MPO.71)	12"	800	800	800
131	E. Rio Vista Field (MPO.00) to Antioch Terminal (MP9.19)	10"&12"	800	800	800
131	Antioch Terminal (MP9.19) to Irvington Sta (MP50.57)	24"	500	500	600
131	Irvington Sta to Milpitas Terminal (MP57.45)	30"	600	600	650
132	Milpitas Terminal (MPO.00) to Martin Sta (MP46.59)	24"30"36"	400	400	400
132	Martin Station to Potrero Plant (MP51.50)	24"	150	150	275
132	Sierra Vista Ave (MP10.32) to Rengstorff Ave Sta (MPO.00 to MP1.47)	16"&24"	400	400	400
132	Martin Sta (MP46.59) to Geneva Ave (MP39.86) Line 101 (MPO.00 to MPO.35)	20"	400	400	400
133	Gill Ranch Field Collection System	4"6"8"	600	600	720
134	Herndon Jct (MPO.00) to (MP21.57)	6"8"	500	550	720
134	MP21.57 to Arbios Meter Sta (MP27.04)	6"	500	500	720
134	Arbios Meter Sta. to MP30.50	6"&8"	500	500	720
134	Arbios Meter Sta (MP27.04) to Firebaugh Reg. Sta (MP34.13)	3" & 4"	500	500	720

\*\*SEE PAR. 6

(see over)

Trans. Line No.	Designation	Nominal Pipe Dia. (Inches)	PG&E MOP PSI	MAOP	Design Press.
136	Ord Bend Mtr Sta (MP0.00) to Sterling Jct (MP12.87)	6"	600	600	720
*137	Whipple & Albee Sts, Eureka (MP0.00) to (MP11.83)	4" & 6"	150	500	720
137	Ryan Slough Reg. Sta (MP3.58) to Arcata (MP7.37)	8"	600	600	720
138	Helm Tap Sta (MP0.00) to Helm Jct (MP14.94)	10"	650	650	650
138	Helm Tap Sta (MP0.00) to Helm Jct (MP14.71)	20"	650	800	800
138	Helm Jct to PG&E Burrel Meter Sta. (MP22.04)	18"	650	865	865
138	PG&E Burrel Mtr Sta to Adams & Elm Mtr & Reg Sta (MP38.59)	16"	650	708	720**
138	Adams & Elm Mtr & Reg Sta to Cherry & Jensen Reg Sta (MP45.00)	16" & 12"	650	720	720
138	MP45.00 to Elm & Jensen Mtr Sta (MP45.47)	10"	650	650	720
138	T43.58 to Chestnut & Clay Reg Sta (MP50.02)	16"	650	720	720
138	MP45.10 to Peach Ave (T46.64)	10"	650	720	720
139	Lodi Field Collection System	3" & 4"	800	800	800
140	Lodi Field (MP0.00) to Las Vinas Sta. (MP12.21)	6"	800	800	800
141E	Thornton Mtr Sta to E. Thornton Field Collection System	4" & 6"	800	800	800
141W	Thornton Mtr Sta to W. Thornton Field Collection System	3" - 10"	800	800	800
*141	NE River Islands and Walnut Grove Fields Collection System	3" & 4"	800	800	800
142N	Bakersfield Tap (MP0.00) to Bakersfield Mtr Sta (MP14.05)	6" & 8"	800	800	800
142S	Gosford Rd Mtr Sta (MP0.00) to Brundage Lane & V St. Reg Sta (MP9.00)	12"16"20"	500	500	720
142	MP9.00 to Bakersfield Mtr Sta (MP11.47)	10"	500	500	720
*142	MP9.00 to Bakersfield Mtr Sta (MP11.47)	8" - 12"	300	300	720
*143	Millar Field Collection System	3" & 4"	800	800	800
144	Millar Mtr Sta (MP0.00) to Millar Field (MP3.50)	12" & 10"	800	800	800
145	Maine Prairie Field Collection System	3" 4" 6"	800	800	800
146	Maine Prairie Mtr Sta (MP0.00) to Maine Prairie Field (MP6.00)	8"	800	800	800
147	Whipple Rd Crossover (MP0.00) to San Carlos Reg Sta (MP3.39)	24" & 20"	400	400	400
148	McMullin Ranch Mixer Sta (MP0.00) to Ceres Reg Sta (MP18.24)	8"	500	500	720
149	Winters Field Collection System	4" & 6"	800	800	800
150	Winters Mtr Sta (MP4.70) to Tremont Tap (MP13.28)	6"	800	800	800
150	Dixon Field Collection System	4"	800	800	800

\*\*SEE PAR. 6

Trans. Line No.	Designation	Nominal Pipe Dia. (Inches)	PG&E MOP PSI	MAOP	Design Press.
151	Afton Odorizer Sta (MP0.42) to Afton Reg Sta (MP14.05)	6"	500	500	720
151	Schohr Ranch Field Collection System	6"	500	500	720
152	Afton Field (MP0.00) to Afton Odorizer Sta (MP0.42)	6"	500	500	720
153	Irvington Sta (MP0.00) to Marina Blvd Sta (MP18.00)	30"	437	437	500**
*153	Marina Blvd Sta to 2nd & Market Sts (MP27.89)	24"	250	250	275
153	Tap to Oakland Holder Station	20"	250	250	275
153	Alvarado Crossover to Line 105	16"	250	250	500**
*153	Fairway Ave Crossover to Line 105	30"	150	542	542
155	Durham Field Collection System	4"	800	800	800
156	Durham Field (MP0.00) to Durham Field Mtr Sta (MP5.72)	6"	800	800	800
158	Dunnigan Hills Fld (MP4.90) to Dunnigan Hills Mtr & Reg Sta (MP13.65)	4" & 6"	800	800	800
*158	Woodland Field Collection System	3" & 4"	800	800	800
159	Pleasant Creek Comp Sta (MP0.00) to Pleasant Creek Reg Sta (MP3.91)	4"	800	1000	1000
159	Pleasant Creek Reg Sta to Winters Mtr Sta (MP6.08)	4"	800	800	800
159	Winters Field Collection System	4"	800	800	800
*162	Tracy Sta (MP0.00) to Banta Reg Sta (MP7.73)	6" & 8"	325	350	720
162	Tracy Sta to Bryon Rd (MP3.64)	10"	325	720	720
164	Coalinga Field Collection System	10" & 8"	500	500	865
167	E. Beehive Bend Odorizer Sta (MP0.00) to Yuba City HPU Holder Sta (MP34.50)	12" & 16"	800	800	800
167	Wild Goose Fld Mtr Sta (MP0.00) to Wild Goose Mixer & Odorizer Sta (parallel)	10"	800	800	800
167	Wild Goose Mxr. & Odorizer Sta (MP0.00) to Gridley Jct Sta (MP6.54)	8"	800	800	800
167	Wild Goose Collection System	3" & 4"	800	800	800
167	Princeton Fld Collection System (MP4.12 to MP7.60)	3"	800	800	800
167	Compton Landing Field Collection System	6" & 4"	800	800	800
167	Bounde Creek Field Collection System	4"	800	800	800
168	River Islands Field Collection System	4" 6" 8"	800	800	800
169	Beehive Bend, Willows, Llano Seco & Perkins Lake Fields Collection System	3" - 20"	800	800	800
172	W. Beehive Bend Mtr & Odorizer Sta (MP0.00) to Swingle Jct (MP69.81)	18" & 20"	800	800	800
172	Swingle Jct to Sacramento Gas Plant (MP79.15)	16"	590	590	720
172	Crosstie between Line 172 (MP0.00) & Line 167 (MP0.6)	10"	800	800	800
172	Crosstie between Line 172 (MP0.00) & Line 119 (MP0.25)	12"	590	590	720

\*\*SEE PAR. 6

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Trans. Line No.	Designation	Nominal Pipe Dia. (Inches)	PG&E MOP PSI	MAOP	Design Press.
*173	Line 123 (MPO.00) (V-6.51) to Auburn Reg Sta (MP17.56)	4"6"8"	500	500	720
*174	Arbuckle Field Collection System	2" - 10"	800	800	800
176	Roberts Island Field Collection	2" - 8"	500	800	800
177	Sacramento Ave. Jct. (MPO.00) to Grapeway Reg. Sta. (MPO.87)	10"	800	960	960
177	Grapeway Reg. Sta. to Stirling Jct. Mrt Sta. (MP7.68)	10"	600	600	600
177	Fell Reg. & Odorizer Sta. (MPO.00) to Sacramento Ave. Jct. (MP4.75)	16"	800	960	960
177	Sacramento Ave. Jct. to Corning N Dome Mxr. & Comp. Sta. (MP29.09)	10"	800	960	960
177	Tap (27.60) MPO.00 to Tap (29.87) MP2.19 parallel section near Corning N. Dome	6" & 8"	911	960	960
177	Corning N. Dome Mxr & Comp Sta to Cummings Creek PLS (MP163.04)	12"	911	960	960
177	Cummings Creek PLS to Tompkins Hill Mtr & Reg Sta (MP178.18)	12"	720	720	720
177	Tompkins Hill Mtr & Reg Sta to Ryan Slough Reg Sta (MP192.26)	12"	600	600	600
177	Crosstie between Lines 177 (T37.8) (MPO.00) & 400 (V149.18) (MPO.06)	12"	911	960	960
177	Tap (MPO.00) (V-43.87) to Red Bluff & Diamond Nat'l Corp. Primary & Secondary Reg Sta (MP1.24)	6"	911	960	960
177	Rancho Capay Field Collection System	4"	800	960	960
179	Corning North Field Collection System	8"	911	960	960
180	Kettleman Hills Field Collection System	8"10"12" 16"&20"	500	500	500
179	Corning South Field Collection System	3" & 4"	911	960	960
181	Soap Lake Mtr Sta (MPO.00) to Watsonville Mtr Sta (MP20.15)	10" & 12"	300	300	400
181	Anzar Rd Mtr & Reg Sta (MPO.00) to Watsonville Mtr Sta (MP11.19)	10"16"20"	400	400	400
*182	Serpa "Y" (MPO.00) to Shell Chemical Mtr Sta (MP18.23)	4" 8" 10" & 12"	800	800	800
*182	Shell Chemical Meter Sta to Suisun Jct. Mtr Sta. (MP18.87)	12"	350	350	600
182	Kirby Hills Field Collection System	3"-8"	800	800	800
182	Suisun Field Collection System	2" - 6"	800	800	800
183	Firebaugh Reg Sta (MPO.00) to Moffat Fld Mtr & Reg Sta (MP6.35)	3"	800	800	800
185	Hollister Field Collection System	4"	400	600	600
186	Dos Palos Mtr Sta (MPO.00) to Red Top Reg. Sta (MP26.1)	3" 4" 6"	<del>605</del>	<del>625</del>	720
187	San Ardo Field Mtr & Odorizer Sta (MPO.00) to Jolon Rd Reg Sta (MP22.58)	6"	870	870	870
187	Jolon Rd Reg Sta to Harkins Rd Mtr & Mxr Sta (MP65.70)	8"	600	600	720

Trans. Line No.	Designation	Nominal Pipe Dia. (Inches)	PG&E		Design Press.
			MOP PSI	MAOP	
189	Elk River Rd Reg Sta (MPO.00) to Humboldt Bay Power Plant (MP1.72)	10"	500	600	720
190	Kettleman Comp. Sta (MPO.00) to Coalinga Nose Storage Field Meter. (MP16.08)	12"16"	2200	2200	2200
190	Coalinga Nose Storage Field Meter to Union Oil Co. (MP16.22)	16"	2100	2100	2100
191	Antioch Terminal (MPO.00) to MP9.93 Via Pittsburg Power Plt.	24"	375	500	600
191	MP9.93 to Plaza Reg Sta (MP26.53)	20"16"12"	375	500	600
*191	Plaza Reg Sta to Martinez Mtr & Reg Sta (MP35.83)	12" & 10"	400	400	400
*191A	Jct Line 191 to Ardilla & Camino Pablo & Camino Sobrante Reg Stations	8"6"3"	400	400	400
*191B	Jct Line 191 to Reliez Valley Rd Reg Sta	8"	400	400	400
193	Rice Creek Field Collection System	2"3"4"			
		6" & 8"	800	960	960
193	Malton Field Collection System	4"6"8"	800	960	960
193	Kirkwood & Rice Creek Field North Collection System	6"	800	960	960
194	McMullin Ranch Mxr Sta (MPO.00) to (MP2.83)	10" 8"	720	800	800
194	McMullin Field Dehy. Sta (MPO.00) to Cal. Ammonia Co. (MP4.39)	6"	720	800	960
194	McMullin Ranch Field Collection System	2" 10"	720	800	800
*195	Rio Vista Field Collection System	2" 16"	800	800	800
196	Las Vinas Station (MPO.00) to Isleton Mtr Sta (MP13.45)	8"10"12"	800	800	800
197	Las Vinas Station (MPO.00) to MP5.50	6"	385	500	720
197	Las Vinas Station to MP39.60	10" 12"	500	500	720
197	Ione Tap V-17.44 (MPO.00) to MP23.02	10"	500	720	720
197	MP21.90 to MP33.57	8"	300	350	720
197	MP39.60 to Calaveras Cement Mtr Sta (MP43.94)	8"	300	350	720
199	Bunker Field Collection System	3"4"6" & 8"	800	800	800
*200	W. Rio Vista Fld Collection System	2" 16"	800	800	800
200	Lindsey Slough Field Collection System	3" 10"	875	875	960
201	Todhunters Lake Field Collection System	2" 4"	800	960	960
202	Grass Valley Tap(T2.87)Line 124 (MPO.00) to Reg. Sta near Robin Ave, Grass Valley (MP22.82)	6" 8"	600	720	720
210	Rio Vista "Y" (MPO.00) to Creed Sta (MP1.40)	16"	800	800	800
210	Creed Sta to Napa "Y" (MP25.98)	16" 18"	720	740	740
210	V-27.67 (MPO.00) to Humble Oil Meter Sta (MP3.70)	18"	675	720	720
210	Rio Vista "Y" (MPO.00) to Creed Station (MP1.36)	10"	720	800	800
210	Creed Station to Cordelia Reg. Sta. (MP19.47)	32"	675	675	675
210	Cordelia Reg. Sta. to Napa "Y" (MP25.62)	10" 12"	800	800	800
210	Cordelia Reg. Sta. to Herrman Sta (MP32.11)	24"	675	675	675
220	Rio Vista "Y" (MPO.00) to Davis Mtr & Reg Sta (MP22.01)	8"10"12"	800	800	800

(see over)

Trans. Line No.	Designation	Nominal Pipe Dia. (Inches)	PG&E		Design Press.
			MOP PSI	MAOP	
220	Davis Mtr & Reg Sta to Dunnigan Mtr & Reg Sta (MP34.11)	6" 8"	500	500	500
300A	Colorado River (MPO.00) to Topock Comp Sta (MPO.64)	30" 34"	700	700	700
300A	Topock Comp Sta to PLS 1A (MP40.87)	34"	865	890	890
300A	PLS 1A (MP40.87) to PLS 2A (MP103.72)	34"	815	815	815
300A	PLS 2A to PLS 2AX (MP130.37)	34"	688	688	688
300A	PLS 2AX to Hinkley Comp Sta (MP159.33)	34" 26"	573	573	573
300A	Hinkley Comp Sta to PLS 3A (MP203.02)	34"	865	890	890
300A	PLS 3A to PLS 4A (MP256.21)	34"	803	817	817
300A	PLS 4A to PLS 5A (MP299.01)	34"	736	757	757
300A	PLS 5A to Kettleman Comp Sta (MP353.85)	34"	669	688	688
300A	Kettleman Comp Sta to PLS 6A (MP436.74)	34"	840	890	890
300A	PLS 6A to PLS 7A (MP490.65)	34"	715	715	715
300A	PLS 7A to Milpitas Terminal Sta (MP502.34)	34"	558	558	676
300B	Colorado River (MPO.00) to Topock Comp Sta (MPO.45)	34"	735	735	735
300B	Topock Comp Sta to PLS 1B (MP40.49)	34"	865	894	894
300B	PLS 1B to PLS 2B (MP103.51)	34"	815	821	821
300B	PLS 2B to PLS 2BX (MP130.40)	34"	688	688	688
300B	PLS 2BX to Hinkley Comp Sta (MP161.02)	34"	573	573	573
300B	Hinkley Comp Sta to PLS 3B (MP203.07)	34"	865	897	897
300B	PLS 3B to PLS 4B (MP256.64)	34"	803	816	816
300B	PLS 4B to PLS 5B (MP299.00)	34"	736	757	757
300B	PLS 5B to Kettleman Comp Sta (MP354.02)	34"	669	688	688
300B	Kettleman Comp Sta to PLS 6B (MP436.85)	34"	840	890	890
300B	PLS 6B to PLS 7B (MP490.92)	34"	715	715	715
300B	PLS 7B to Milpitas Terminal Sta (MP502.64)	34"	600	669	669
301	Hollister Mtr Sta (MPO.00) to Moss Landing Power Plant (MP24.68)	24" 30"	500	500	500
301	Hollister Mtr Sta (MPO.00) to Moss Landing Power Plant (MP24.84)	20"	396	396	500
301	Dolan Rd Mtr Sta (MPO.00) to Hilltown Reg Sta (MP14.02)	12"	396	600	600
*301	Hilltown Reg Sta to Harkins Rd Mtr & Mxr Sta (MP17.20)	8" 12"	300	350	500
*301	Espinosa Rd (Castroville) (MPO.00) to Marina Reg Sta (Fort Ord) (MP7.94)	16"	400	400	400
*301	Crosstie - Monterey #2 (MPO.00) to Main 301 (MP1.02)	12"	400	400	500
301	10" Line 301 (MPO.00) to Anzar Rd Mtr & Reg Sta (MP1.72)	10"	500	500	500
302	Sutter Buttes, W. Butte, Butte Slough, Grimes, Sycamore, Kirk & Buckeye Gas Flds Coll. Sys.	2" 20"	1000	1000	1000
302	Buckeye Cr. P.L.S. (MPO.00) to Hershey Jct (MP5.76)	20"	1000	1000	1000

Trans. Line No.	Designation	Nominal Pipe Dia. (Inches)	PG&E		Design Press.
			MOP PSI	MAOP	
303	Antioch Terminal (MP0.00) to Brentwood Terminal (MP7.86)	36"	720	720	720
303	Brentwood Terminal to Irvington Sta (MP42.83)	36"	600	600	600
304	Tracy Sta (MP0.00) to Lathrop Dehydrator & Odorizer Station (MP11.29)	12"	825	825	825
304	Lathrop Field Collection System	3" - 12"	825	825	825
306	Kettleman Comp Sta (MP0.00) to Morrow Bay Power Plant (MP70.02)	20"	840	840	840
307	Spreckels Sugar Mtr Sta (MP0.00) to Spreckels Sugar Reg Station (MP16.36)	8"	500	915	915
307	Derrick Rd Tap (MP0.00) (T12.05) to Arbios Reg. Station (MP4.95)	8"	500	915	915
311	Main 300 (MP0.00) (V-180.64A) to Westend Primary Reg Station (MP54.44)	10" & 12"	810	810	960
311	Parallel Section (MP31.97) to (MP38.49)	12"	810	810	960
312	Line 300A (MP0.00) T-273.27 to Paloma Field Mtr Sta (MP8.00)	8"	800	800	820
313	Lucerne Valley Tap Mtr Sta (MP0.00) to Permanente Co. Mtr & Reg Sta (MP34.4)	8" & 10"	573	650	720
314	Hinkley Comp Sta (MP0.00) to MP24.19	12"	865	889	890
314	MP24.19 to MP29.00	10"	600	600	720
314	MP29.00 to Black Mountain Mtr & Reg Sta (MP43.18)	10" & 8"	600	720	720
314	Tap to Riverside Cement Mtr & Reg Sta	8"	600	600	720
314	Tap to Airbase Rd Mtr Sta	8"	600	600	720
*316	Dutch Slough & River Break Fields Coll. Sys.	2" - 12"	800	800	800
318	Black Butte Field Collection System	3"	910	911	960
372	Ridgecrest Tap to Ridgecrest Primary Reg.	6" ..	810	810	960
400	California-Oregon Border (MP0.00) to Delevan Comp Sta (MP197.83)	26" & 36"	911	911	911
400	Delevan Comp Sta to Buckeye Cr. P.L.S MP233.87	36"	1040	1040	1040
400	Buckeye Cr. P.L.S to Antioch Term. (MP298.87)	26" & 36"	975	975	975
402	Redding Calaveras Tap (MP0.00) to PLS (MP9.96)	12"	865	865	865
402	MP9.96 to Calaveras Cement Tap (MP38.1)	8"10"12"	720	720	720
403	Rio Vista "Y" (MP0.00) to Creed Sta (MP1.38)	16"	800	855	855

\*Indicates that line and/or sections of line are under 20% of SMYS, but are listed for the purpose of continuity.

DISTRIBUTION MAINS OPERATING AT OR  
 ABOVE 20% OF SMYS

	Nominal Pipe Dia. (Inches)	PG&E MOP PSI	MAOP	Design Press.
<u>COAST VALLEYS DIVISION</u>				
Monterey #1 - Harkins Rd Mtr & Mxr Sta to Fig-Frank Sts Reg Sta	8" & 12"	300	300	500
Monterey #2 - Fort Ord Jct to <del>Monterey Reg Sta</del> <i>Fig-Frank Sts.</i>	10"12"16"	300	300	400
Monterey (V-18.65 to Carmel V-2.13) Aguajito Rd Reg Sta	8" & 10"	300	300	500
Harkins Rd Mtr & Mxr Sta to California St. Reg. Sta	8" & 10"	350	350	500
Salinas Main - Foster Rd to San Miguel Ave	8"	350	350	500
<u>COLGATE DIVISION</u>				
Yuba City HPU Holder to 9th & Yuba Reg Sta Tap (MPO.58) to Market St. Reg pit	6" & 8"	400	400	400
<u>DRUM DIVISION</u>				
Diamond Oaks Feeder	6"	500	500	500
<u>EAST BAY DIVISION</u>				
Avon Power Station Feeder	8" & 12"	350	350	600
Phillips Petroleum Feeder	12"	350	350	600
General Chemical Tap	4"	350	350	600
Pacific States Steel Feeder	12"	500	500	500
Warm Springs Feeder	2" & 4"	500	500	500
Port Costa Feeder	6"	350	350	600
50th Ave Holder Feeder	16" & 20"	250	250	250
Pittsburg Town Feeder	12"	350	350	600
Concord Feeder	8"	600	600	600
Lafayette - Moraga Feeder	12"	600	600	600
Richmond Holder Sta to Carlson & San Pablo Ave	24"	150	150	275
Antioch Terminal to Contra Costa Power Plant	20" & 34"	275	275	275
Standard Oil Feeder	22"	400	400	400
Rodeo Feeder	8" & 6"	175	400	400
Bethlehem Feeder	8"	175	400	400

(see over)

	Nominal Pipe Dia. (Inches)	PG&E MOP PSI	MAOP	Design Press.
<u>NORTH BAY DIVISION</u>				
San Rafael HPUH to Adobe Pit	8" 12" 16"	450	450	675
Cotati Feeder	8"	450	450	675
12" Line 21 (V-16.15) to Pine St. Mtr Sta	8"	450	450	675
12" Line 21 (V-16.15) to Kilburn Reg Sta	10"	450	720	720
<u>SACRAMENTO DIVISION</u>				
Sacramento Gas Plant to North Sacto. HPU Holder	12" 8"	275	400	400
Davis Meter & Reg. Sta. to Dixon Meter Sta.	6"	800	800	800
Tap to Union Carbide (MPO.00 to MP4.05)	10" 8"	412	490	600
<u>SAN FRANCISCO DIVISION</u>				
Peninsula Main	16" & 20"	150	150	150
Hunters Point Power Plant Feeder	20"	150	150	150
<u>SAN JOAQUIN DIVISION</u>				
Selma Feeder	8"	400	450	720
Yosemite Ave. Feeder	6"	400	400	400
Main 300A to California-Portland Cement Reg Sta	3" & 6"	865	865	865
California-Portland Cement Reg Sta to California-Portland Cement Co.	6"	600	600	600
Snelling Highway Feeder	6"	400	400	400
Fresno Gas Plant to Fresno HPUH (Dist. Main 55)	12"	690	690	690
Westend Primary Reg. Sta. to Trona	10"	400	400	500
<u>SAN JOSE DIVISION</u>				
Half Moon Bay Feeder Line	8" 10" & 12"	400	577	577
Santa Cruz H.P. Holder to Davenport	12"	400	551	557**

\*\*SEE PAR. 6

<u>Nominal</u> <u>Pipe Dia.</u> <u>(Inches)</u>	<u>PG&amp;E</u> <u>MOP</u> <u>PSI</u>	<u>MAOP</u>	<u>Design</u> <u>Press.</u>
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SHASTA DIVISION

Kimberly-Clark Paper Mill Feeder	6"	475	720	720
U.S. Plywood Plant Feeder	4"	475	720	720
Enterprise Town Feeder	4" & 6"	475	720	720
Calaveras Cement Company Feeder	8"	475	720	720
Red Bluff District Tap	2"	911	911	911

STOCKTON DIVISION

Valley Tomato Trunk Line	8"	412	500	720
Eight-Mile Road Trunk Line	4" & 8"	412	500	720
Ripon-Modesto Feeder (parallel)	8" & 12"	412	500	720
Dale Road to North Ave Feeder	12"	412	500	720
Riverbank Feeder	8" & 10"	412	500	720
Carpenter Road Feeder	12"	412	500	720
Modesto Feeder via Pauline Blvd.	4" & 6"	412	500	720