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PG and E

FOR INTRA—COMPANY USES

DIVISION OR DEPARTMENT: VICE PRESIDENT - GAS OPERATIONS
FILE NO: 463
RE LETTER OF
SUBJECT: Standard Practice 463-8
MAOP of Pipelines and Mains
Operating Over 20% of SMYS

Main #9

April 9, 1979

DIVISION MANAGERS
MANAGER, GENERAL CONSTRUCTION
MANAGER, PIPE LINE OPERATIONS
DIVISION GAS SUPERINTENDENTS
DISTRICT MANAGERS
DISTRICT GAS SUPERINTENDENTS
DIVISION ADMINISTRATIVE ANALYST OR EQUAL
DIRECTOR, PROCEDURES AND ORGANIZATION:

The attached Standard Practice 463-8 dated April 9, 1979 replaces the revised Standard Practice issued on May 1, 1975.

The Standard Practice no longer contains Appendices A, B, and C which listed the pressure of pipelines, mains and high pressure underground holders operating at or above 20% of SMYS. This information is now contained in drawing 086868, which will be issued by the Manager of Gas System Design Department and updated as required. A copy of drawing 086868 is attached.

Additional copies of this Standard Practice may be obtained from Gas Operations by calling extension 1604.

Copies of drawing 086868 may be obtained by calling extension 3202.

Howard M. McKinley

HOWARD M. McKINLEY

JYura(2863):cm

cc: Gas Operations Managers

Attachments

62 7301 REV 4-65

PACIFIC GAS AND ELECTRIC COMPANY
STANDARD PRACTICE

STANDARD PRACTICE NO 463-8

EXECUTIVE OFFICE OR DIVISION GAS OPERATIONS — PAGE NO 1 EFFECTIVE 4/9/79

ISSUING DEPARTMENT GAS SYSTEM DESIGN — REPLACING PAGE NO 1 EFFECTIVE 5/1/75

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 (DP), Maximum Allowable Operating Pressures (MAOP), and Maximum Operating Pressure (MOP) (PG&E) for all pipelines, mains and holders operating at or above 20% of specified minimum yield strength (SMYS) of the pipe material.

RECISIONS

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 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 (PG&E), MAOP and DP.

REFERENCES

*5 Drawing 086868 "Maximum Operating Pressures of Pipelines and Mains Operating at or Above 20% of SMYS"
Current edition of California Public Utilities G.O. 112
S.P. 412-1, "External Corrosion Control of Buried Gas Facilities"
S.P. 460-1, "Location Class Changes: Pipelines and Mains"
S.P. 460.2-2, "Physical Inspection: Pipelines, Mains and Services"
S.P. 460-21-4, "Periodic Leakage Surveys of Gas Transmission and Distribution Facilities"
S.P. 463.7, "Pipeline History File, Establishing and Maintaining"

DEFINITIONS

*6. Design Pressure (DP) is the maximum pressure permitted by the design sections of the current edition of G.O. 112, 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 the current edition of G.O. 112 for Type 3 construction for line size listed (See double asterisk entries in Drawing 086868).

* Paragraph Revised
** Paragraph Added

(SEE OVER)

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

DEFINITIONS

Future Design Pressure is the Design Pressure (DP) to be used for future additions to existing facilities, as shown on the latest revision of Drawing 086868.

Maximum Allowable Operating Pressure (MAOP) is the maximum pressure at which a pipeline or section of a pipeline may be operated in accordance with all the applicable provisions of the current edition of G.O. 112.

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 or as specified in Section 192.107 of the current edition of G.O. 112.

APPLICATION

*7. Procedural details appear in the addenda to this Standard Practice.

RECORD

8. Pressure Recording Charts and Operating Sheets (record of hourly data) which document the MAOP and/or MOP (PG&E) of pipelines and mains operating at or above 20% of SMYS shall be kept current by the Division and/or Pipe Line 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: Howard M. McKinley
Vice President - Gas Operations

DISTRIBUTION:
Division Managers
Division Gas Superintendents
District Gas Superintendents
District Managers
Division Admin. Analyst or Equal
Director, Procedures Analysis
Pipe Line Operations

Additional copies of this Standard Practice may be obtained from Gas Operations, 77 Beale Street, San Francisco, (PG&E Ext. 22-1604).

* Paragraph Revised
** Paragraph Added

(SEE OVER)

PROCEDURAL DETAILS

*10. Piping systems shown on Drawing 086868 are not to be operated in excess of the MOP (PG&E). This limitation has been determined by the lowest of the following:

a) The test pressure or the rated working pressure of the pipe, valves, and fittings in the line.

b) The MAOP of the line as established in accordance with the provisions of the current edition of G.O. 112.

c) The MAOP of another pipeline system connected to the first system where there is no pressure control complete with over pressure protection between the two systems.

d) Operating conditions that limit pressure.

*11. The MOP (PG&E) may equal, but shall never exceed the MAOP or the DP. In some cases where the MAOP is less than DP, it is anticipated that the MAOP may be increased at some future time, in accordance with Subpart K (Uprating) of the current edition of G.O. 112. For this reason, all new additions to an existing system shall have a design pressure at least equal to the design pressure listed in Drawing 086868. Some sections of an existing system may not qualify for the established design pressure and would require reconstruction, testing, or replacement prior to increasing the MAOP. See Paragraph 6.

12. New or replacement sections of line should be tested and qualified for the ultimate MAOP of the system, even though the MOP (PG&E) of the system is limited by the MAOP of other facilities connected to it.

13. Any changes contemplated in the MOP (PG&E) or the MAOP of a line operating at or over 20% of SMYS shall be submitted by the Division Gas Superintendent or the Manager of Pipe Line Operations, in letter form, to the Manager of Gas System Design, for review and approval. A copy should be sent to the Manager of Gas System Planning.

*14. 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 Drawing 086868 shall be confirmed annually by letter on or before February 1, by the Division Gas Superintendents and the Manager of Pipe Line Operations to the Manager of Gas System Design Department, for each facility within the scope of this Standard Practice.

*15. The Manager of Gas System Design Department will issue and distribute an updated copy of Drawing 086868 giving pipeline pressures (Drawing 086868) as required.

*Paragraph Revised
**Paragraph Added

PURPOSE

This drawing lists the operating limitations and design requirements for all pipelines, mains and holders operating at or above 20% of the specified minimum yield strength (SMYS) of the pipe.

See S.P. 463-8 for detailed requirements for establishing and maintaining the MAOP of gas facilities.

DEFINITIONS

Maximum Allowable Operating Pressure (MAOP) is the maximum pressure at which a pipeline or section of a pipeline may be operated in accordance with all the applicable provisions of the current edition of G.O. 112-C.

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.

Design Pressure (DP) is the maximum pressure permitted by the design sections of the current edition of G.O. 112-C, 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 the current edition of G.O. 112-C for Type 3 construction for line size listed (see double asterisk entries).

Future Design Pressure is the Design Pressure (DP) to be used for future additions to existing facilities.

CHANGES IN THE MAOP REQUIRE CPUC NOTIFICATION

General Order 112-C (Subpart C) requires the Company to notify the CPUC 30 days prior to the uprating of any system operating, or to be operated, at 20 percent SMYS or greater.

The CPUC must be advised within 30 days after the lowering of the MAOP of a line operating at 20 percent or more of SMYS.

Any changes contemplated in the MOP (PG&E) or the MAOP of a line operating at or over 20% of SMYS shall be submitted by the Division Gas Superintendent or the Manager of Pipe Line Operations, in letter form, to the Manager of Gas System Design, for review and approval.

APPROVED BY								
REV	DATE	DESCRIPTION	GM	DWN	CHKD.	SUPV	APVD

GM	PIPELINE - DATA SHEET	B/M	
SUPV	MAOP OF LINES OPERATING AT OR OVER 20% SMYS	DWG LIST	
DSGN	TYPICAL	SUPSDS	
DWN		SUPSD BY	
CHKD		SHEET NO 1 of 30 SHEETS	
O K			
DATE 4/9/79	SCALE	PACIFIC GAS AND ELECTRIC COMPANY SAN FRANCISCO, CALIFORNIA	086868 REV 0

62-1804 Rev 7-75 MICROFILM

MAOP INDEX

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MACP	Design Press.	Future Design Press.
21	0.00	1.07	Crockett Station to MP 1.07	24" & 26"	400	405	650	675
21	1.07	1.52	MP 1.07 to Herrmann Station	24"	400	675	675	675
21	1.52	2.71	Herrmann Station to Reis Avenue	16"	250	258	575**	575**
21	2.71	12.05	Reis Avenue to Napa "Y"	12"	250	375	585	585
21	12.05	35.05	Napa "Y" to MP 35.05	12" & 26"	450	450	675	675
21	35.05	51.41	MP 35.05 to MP 51.41	12"	450	500	720	675
21	51.41	53.12	MP 51.41 to Santa Rosa Compressor Station	12"	450	494	720	675
21	53.12	137.38	Santa Rosa Compressor Station to Willits	8" & 12"	820	820	890	890
21	0.00	18.64	Napa "Y" to MP 18.64	16"	450	500	720	675
21	18.64	25.84	MP 18.64 to Pepper Road	16"	450	500	720	675
21	34.84	35.86	McDowell Road Tap to Petaluma Meter Station	12"	450	500	593	675
21	0.00	21.11	Adobe to San Rafael HPU Holder Station	16" & 20"	450	500	500	500
21	0.00	21.11	Adobe to San Rafael HPU	12"	450	500	500	500
*50	0.00	2.87	5th & Walnut Streets, Marysville to Yuba City HPU	8"	400	400	720**	720**
*50	2.87	21.62	Yuba City HPU to Biggs Regulator Station	8"	250	250	720**	720**
*50	21.62	26.94	Biggs Regulator Station to Richvale "Y"	6" & 8"	250	250	720**	720**
*50	26.94	44.87	Richvale "Y" to Butte Station	6", 8", 12"	400	400	686**	720**
50	0.00	7.81	MP 0.00 to Paradise	8"	400	720	720	720
56			Pleasant Creek Field Storage System	4"	1300	1300	1300	1440

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

**DP has been established as the maximum pressure for the minimum wall thickness required under the current edition of General Order 112-C for Type construction for line size listed.

Note: Transmission line numbers which are underlined indicate changes by this revision of Standard Practice 463.8.

SHEET 3 OF 30 SHEETS

P G & E CO.

DRAWING NUMBER 086868

REV C

MICROFILM

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
56			Pleasant Creek Field Storage System	4" & 8"	1300	1440	1440	1440
57			McDonald Island Field Storage System	4" - 12"	2160	2160	2160	2160
57	0.00	7.47	McDonald Island Compressor Station to PLS	14",16",18"	1025	1025	1025	1025
57	7.47	16.64	PLS to Brentwood Terminal	18"	867	867	867	867
57B	0.00	16.46	Brentwood Terminal to McDonald Island	22"	2160	2160	2160	2160
65			SP 3 (T176.7) to Los Medanos Compressor Station	4",6",10"	315	600	600	600
65			Los Medanos Field Storage System	4"	1000	1000	1000	1800
100	134.5	150.13	MP 134.5 to Milpitas Terminal	20"	400	400	552	552
101	0.00	9.80	Milpitas Terminal to Rengstorff Avenue Station	36"	400	400	400	400
*101	9.80	33.68	Rengstorff Avenue Station Via Bayshore to San Francisco Border Meter Station	20"	180	180	275	400
*101	33.68	44.56	San Francisco Meter Station Via Bayshore Boulevard to Potrero Gas Plant	20"	109	110	275	275
*103	0.00	23.55	Hollister Meter Station Regulator Station	12"	350	350	670**	500
103	23.55	26.63	California Street Regulator Station To Harkins Road Meter and Mixer Station	12"	313	313	670**	500
105	6.88	23.03	Irvington Station to San Lorenzo Regulator Station	20", 24" 26" & 34"	250	250	500	500

SHEET 4 OF 30 SHEETS

P G & E CO.

DRAWING NUMBER 096868

REV O

MICROFILM

Material Redacted

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61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

P G & E CO.

SHEET 5 OF 30 SHEETS

DRAWING NUMBER 086868

REV

MICROFILM

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
*105	23.03	52.01	San Lorenzo Regulator Station to San Pablo Station	20", 22" 24" & 30"	150	198	275	275
*105	0.00	2.03	Oakland Holder Station to Berkeley City Limits (Parallel)	24"	150	198	275	275
105	0.00	0.18	Baine Avenue Crossover to Line 153	20"	250	250	590	500
*105	0.00	0.185	West Winton Avenue Crossover to Line 153	22" & 24"	250	250	500	500
105B	0.00	11.85	Crockett Station to San Pablo Station	24"	400	400	400	400
107	0.00	13.11	Tracy Station to Livermore Junction	22"	500	500	500	720
107	13.11	31.22	Livermore Junction to Irvington Station	22"	477	480	500	720
107S	31.22	38.12	Irvington Station to Milpitas Terminal	22",24" & 36"	477	477	500	720
108	0.00	4.59	Stanpac 2 to Vernalis Field Mixing Station	16"	500	500	720	890
108	4.59	8.79	Vernalis Field Mixing Station to McMullin Ranch Mixer Station	16"	408	408	720**	720**
108	8.79	16.7	McMullin Ranch Mixer Station to MP 16.7	16"	408	408	720**	720**
108	16.7	43.5	MP 16.7 to Las Vinas Station	16"	412	412	720**	720**
108	43.5	62.20	Las Vinas Station to MP 62.20	16"	490	490	500	720
108	62.20	75.10	MP 62.20 to Sacramento Division Gas Load Center	16" & 24"	412	412	500	656
*108	27.10	1.71	E. Hazleton & B Streets Regulator Station to Stockton Gas Plant	12"	175	185	275	275
109	0.00	43.47	Milpitas Terminal to Sullivan Avenue Regulator Station	22" & 30"	375	375	400	400

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
*109	43.47	52.71	Sullivan Avenue Regulator to Potrero Gas Plant	26"	150	150	275	275
111	0.00	21.65	Helm Junction to Fresno Junction	12"	650	650	800	720
111	21.65	28.05	Fresno Junction to Division Gas Load Center	8"	400	400	720	720
111			Raisin City Field Collection System	4"	650	800	800	800
111			San Joaquin Field Collection System	3" & 4"	650	800	960	960
112			Vernalis Field Collection System	3" - 8"	594	594	800	800
114	0.00	9.01	West Rio Vista Field to Antioch Terminal	12" & 16"	510	510	800	800
114	9.01	16.59	Antioch Terminal to Brentwood Terminal	22"	595	595	595	720
114	16.59	28.97	Brentwood Terminal to Dalton Avenue	22"	595	595	595	720
114	28.97	33.85	Dalton Avenue to Livermore Junction	36"	595	595[1]	595	720
115			Petaluma Gas Field	2"	450	675	675	675
*116	0.00	3.86	Davis Meter Station to Swingle Junction	8"	500	500	500	800
*116	3.86	6.19	Swingle Junction to V-6.19	16"	500	800[2]	800	800
*116	6.19	12.89	V-6.19 to Sacramento Gas Plant	8"	500	500	500	720
*118	0.00	6.09	Division Gas Load Center to Fresno Junction	8"	400	400	500	720
118	0.00	0.66	Division Gas Load Center to Fresno HPU Station	12"	690	690	720	720
*118	5.86	12.57	Fresno Junction to MP 12.57	12"	400	400	720	720
*118	12.57	73.26	MP 12.57 to Livingston	8"	400	400	500	720
118	0.00	38.39	Herndon to Athlone	12"	400	400	720	720

[1] When this section of 22" Line 114 was abandoned in 1977, the existing 36" section of Line 303 (which had a 600 psig MAOP) became Line 114.

[2] The 800 psig MAOP of this section of Line 116 was established by hydrostatic tests completed on 12/10/75.

PG&E CO. SHEET 6 OF 30 SHEETS

DRAWING NUMBER 086868 REV 0

MICROFILM

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

PG&E CO SHEET 7 OF 30 SHEETS

MICROFILM

DRAWING NUMBER 086868 REV 0

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
118	73.26	74.89	Livingston to Collier Road	6"	400	720	720	720
118	74.89	83.74	Collier Road to Bradbury Road Regulator Station	6"	400	400	400	720
118	80.68	83.74	MP 80.68 to Bradbury Road Regulator Station	8"	400	720[3]	720	720
118	83.74	84.69	Bradbury Road Regulator Station to MP 84.69 (L-215 Tap) Parallel	6" & 8"	500	890	890	890
119	0.00	3.85	Davis Meter Station to Swingle Junction	12"	792	792	800	800
119	3.85	4.85	Swingle Junction to MP 4.85	12"	500	720	800	720
119	4.85	11.14	MP 4.85 to MP 11.14	12"	500	520	800	720
119	11.14	11.35	MP 11.14 to MP 11.35	10"	500	520	800	720
119	11.35	16.46	MP 11.35 to N. Sacramento HPU	12"	500	520	800	720
119	0.00	10.17	N. Sacramento HPU to Antelope Meter Station	12"	500	500	500	600
119	0.00	8.41	N. Sacramento HPU to Antelope Meter Station	6" & 16"	500	500	500	600
119	0.00	2.80	N. Sacramento HPU to MP 2.80	24"	180	180	545	545
119	4.6	5.5	Elm and Traction Avenue Regulator	12"	500	500	500	600
119	0.00	5.25	Sonoma Avenue Regulator and Del Paso Boulevard to Roseville Regulator Station	6"	180	500	500	500
120			Sutter Creek Field Collection System	4" & 6"	492	492	720	720
120			Sutter Buttes Field Collection System	4" & 6"	485	485	720	720
121	0.00	11.54	Marysville Buttes Meter Station to Yuba City HPU	6"	485	485	720	720

[3] The 720 psig MAOP of this new parallel section of Line 118 was established by hydrostatic tests completed on 2/4/75.

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

Trans. Line No.	MP	to	MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
123	0.00		13.57	Antelope Meter Station to Lincoln Junction	12"	500	500	670**	670**
124	0.00		23.46	Lincoln Junction to 5th & Walnut, Marysville	8"	400	400	720	600
124	0.00		26.03	Lincoln Junction to Yuba City HPU	16"	600	600	600	600
124	0.00		3.76	Beale Air Force Base Tap (T 13.31) to MP 3.76	6"	400	400	720	600
125				Tompkins Hill Field Collection System	3",4",6"	448	448	720	720
126	0.00		10.57	Tompkins Hill Meter Station to Union Street Regulator	4"	350	425	720	720
126	0.00		10.89	Tompkins Hill Meter Station to Union Street Regulator	6"	350	425	720	720
126	0.00		3.62	Elk River Road Regulator to T 12.38, Line 126	10"	167	167	720	720
*126	0.00		0.36	MP 0.00 to Eureka Propane	10"	167	167	720	720
126	10.89		12.61	Union Street Regulator to Line 137	6"	167	167	720	720
130A	0.00		0.50	HP Rio Vista Sacramento River Crossing	10"	800	800	800	800
130B	0.00		0.50	LP Rio Vista Sacramento River Crossing	10"	510	510	800	720
131	0.00		0.71	E. Rio Vista Field	12"	510	685	800	720
131	0.00		9.19	E. Rio Vista Field to Antioch Terminal	10" & 12"	720(4) 510(5)	720	720	720
131	9.19		10.47	Antioch Terminal to MP 10.47	24"	438	438	600	720
131	10.47		16.87	MP 10.47 to Brentwood Terminal	24"	438	495	600	720
131	16.87		50.57	Brentwood Terminal to Irvington Station	24"	500	525	600	650

(4) The MOP is 720 psig when this section of L-131 is operated in conjunction with the HP Rio Vista Collection System.

(5) The MOP is 510 psig when this section of L-131 is operated in conjunction with the LP Rio Vista Collection System.

PG&E CO
SHEET 8 OF 30 SHEETS

DRAWING NUMBER 086868 REV 0

MICROFILM

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
131	50.57	57.45	Irvington Station to Milpitas Terminal	30"	590	595	650	650
132	0.00	35.84	Milpitas Terminal to MP 35.84	24",30",36"	400	400	400	400
132	35.84	46.59	MP 35.84 to Martin Station	30", 36"	390	390(6)	400	400
132	46.59	51.50	Martin Station to Potrero Plant	24"	145	145	275	275
132	10.32	0.00, 1.47	Sierra Vista Avenue to Rengstorff Avenue Station	16" & 24"	400	400	400	400
132	46.59	39.86	Martin Station to Geneva Avenue	20"	109	110	275	275
133			Gill Ranch Field Collection System	4",6",8"	300	300	500	720
134	0.00	21.57	Herndon Junction to MP 21.57	6" & 8"	400	500	720	720
134	21.57	27.04	MP 21.57 to Arbios Meter Station	6"	500	500	720	720
134	27.04	30.50	Arbios Meter Station to MP 30.50	6" & 8"	500	500	720	720
134		34.13	Arbios Meter Station to Firebaugh Regulator Station	3" & 4"	500	500	720	720
136	0.00	2.64	Ord Bend Meter Station to MP 2.64	6"	479	565	720	720
136	5.14	12.89	MP 5.14 to Butte Station	6"	550	550	720	720
*137	0.00	11.83	Whipple and Albee Streets, Eureka to MP 11.83	4" & 6"	167	167	720	720
137	3.58	7.37	Ryan Slough Regulator Station to Arcata	8"	350	350	720	720
138A	0.00	14.94	Helm Tap Station to Helm Junction	16"	800(7)	862	862	862
138B	0.00	14.71	Helm Tap Station to Helm Junction	20"	700	700	800	890
138	14.71	22.04	Helm Junction to Elkhorn Station	18"	800(7)	865	865	890
138	20.50	22.04	Elkhorn Station to Burrel Meter Station	18"	650	650	865	720
138	22.04	38.59	Burrel Meter Station to Adams & Elm Meter and Regulator Station	16"	650	650	720**	720**

(6) Revised to conform to documented records.

(7) This section of L-138/L-138A has a 700 psig MOP when operating in conjunction with 20" L-138B.

P G & E CO.
SHEET 9 OF 30 SHEETS

DRAWING NUMBER 086868
REV

MICROFILM

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
138	38.59	49.42	Adams & Elm Meter Station to San Joaquin Division Gas Load Center	10",12" & 16"	650	650	720	720
138	43.58	50.02	T 43.58 to Chestnut & Clay Regulator Station	16"	650	650	720	720
138	45.10	46.64	MP 45.10 to Peach Avenue	10"	650	720	720	720
141E			Thornton Meter Station to E Thornton Field Collection System	4" & 6"	538	538	800	800
141W			Thornton Meter Station to W. Thornton Field Collection System	3" - 10"	768	768	800	800
*141			N.E.River Island & Walnut Grove Field Collection System	6" & 8"	768	768	800	800
142N	0.00	14.05	Bakersfield Tap to Bakersfield Meter Station	12",16",20"	475	475	720	720
142S	0.00	9.00	Gosford Road Meter Station to Brundage Lane Regulator	6" & 10"	600	600	720	720
*142	9.00	11.47	Brundage Lane Regulator to Bakersfield Meter Station	8" & 12"	300	300	720	720
*143			Millar Field Collection System	3" & 4"	792	800	800	800
144	0.00	3.50	Millar Meter Station to Millar Field	10" & 12"	792	796	800	800
145			Maine Prairie Field Collection System	3", 4", 6"	510	796	800	800
146	0.00	6.00	Maine Prairie Meter Station to Maine Prairie Field	8"	510	796	800	800
147	0.00	3.39	Edgewood Road Crossover to San Carlos Regulator Station	20" & 24"	400	400	400	400
148	0.00	17.63	McMullin Ranch Mixer Station to Morgan Road Station	8"	408	408	720	720
149			Winters Field Collection System	4" & 6"	750	750	800	800

PG&E CO. SHEET 10 OF 30 SHEETS

DRAWING NUMBER 086868 REV 0

MICROFILM

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

PG&E CO SHEET 11 OF 30 SHEETS

DRAWING NUMBER 086868 REV 0

MICROFILM

Trans. Line No.	MP	to	MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
150	0.00		18.09	Winters Meter Station to Davis Meter Station	6"	750	750	800	800
151	0.42		14.05	Afton Odorizer Station to Afton Regulator Station	6"	250	250	720	720
152	0.00		0.42	Afton Field to Afton Odorizer Station	6"	250	250	720	720
153	0.00		18.00	Irvington Station to Marina Boulevard Station	30",32",34"	420	420	500**	500**
*153	18.00		27.89	Marina Boulevard Station to 2nd and Market Streets	24" & 30"	246	246	275	275
153				Tap to 50th Avenue Holder Station	16" & 20"	246	246	275	275
153				Tap to Oakland Holder Station	20"	246	246	275	275
153				Alvarado Crossover to Line 105	16"	246	250	500**	500**
*153				Fairway Avenue Crossover to Line 105	20" & 30"	150	198	542	500
155				Durham Field Collection System	4"	680	680	800	800
156	0.00		5.72	Durham Field to Durham Field Meter Station	6"	680	680	800	800
158	4.90		13.65	Dunnigan Hills Field to Dunnigan Hills Meter & Regulator	6"	500	564	800	800
*158				Woodland Field Collection System	3" & 4"	500	564	800	800
159	0.00		0.65	Pleasant Creek Compressor Station to V 0.65	4"	975	975	1000	975
159	0.65		3.91	V 0.65 to Pleasant Creek Regulator Station	4"	975	975	1000	975
159	3.91		6.08	Pleasant Creek Regulator Station to Winters Meter Station	4"	750	750	800	800
159				Winters Field Collection System	4"	750	750	800	800

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

Trans. Line No.	MP	to	MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
*162	0.00		7.73	Tracy Station to Banta Regulator Station	6" & 8"	365	365	720	720
162	0.00		6.61	Tracy Station to Holly Road	10"	365	720	720	720
164				Coalinga Field Collection System	10" & 8"	498	498	865	890
167	0.00		34.50	E. Beehive Bend Odorizer Station to Yuba City HPU	12" & 16"	800	800	800	800
167	0.00		4.60	Wild Goose Field Meter to Wild Goose Mixer & Odorizer Station (Parallel)	10"	800	800	800	800
167	4.60		6.54	Wild Goose Mixer to Gridley Junction	8"	800	800	800	800
167				Wild Goose Collection System	3" & 4"	800	800	800	800
167	4.12		7.60	Princeton Field Collection System	3"	800	800	800	800
167				Compton Landing Field Collection System	4" & 6"	800	800	800	800
167				Bounde Creek Field Collection System	4"	800	800	800	800
168				River Island Field Collection System HP	4", 6", 8"	800 720(8)	800	800	800
168				River Island Field Collection System LP	3" - 8"	698	698	800	800
169				Beehive Bend, Willows, Llano Seco & Perkins Lake Field Collection System	3" - 20"	800	800	800	800
172	0.00		69.81	W. Beehive Bend Meter Station to Swingle Junction	18" & 20"	800	800	800	800

(8) The MOP of Line 168 shall be 720 when operated in conjunction with Line 131.

PG&E CO. SHEET 12 OF 30 SHEETS

DRAWING NUMBER 086868 REV

MICROFILM

Material Redacted

GTR0060825

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

P G & E CO.

SHEET 13 OF 30 SHEETS

MICROFILM

DRAWING NUMBER 086868 REV 0

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
172	69.81	79.51	Swingle Junction to Sacramento Gas Plant	16"	500	520	720	720
172	0.00	0.60	Crosstie Between Line 172 and Line 167	10"	800	800	800	800
172	75.45	9.68	Crosstie Between Line 172 and Line 119	12"	500	520	720	720
*173	0.00	17.56	Line 123 (V 6.51) to Aurburn Regulator Station	4" 6" 8"	500	500	720	720
*174			Aurbuckle Field Collection System	2" - 10"	800	800	800	800
176			Roberts Island Field Collection System	2" - 8"	500	555	800	800
176	0.00	18.85	Roberts Island Field to Tracy Station	6" & 8"	500	555	800	800
177	0.00	0.87	Sacramento Avenue Junction to Grapeway Regulator Station	10"	819	819	960	960
177	0.86	7.13	Grapeway Regulator to Butte Station	6" & 10"	469	469	600	600
177	0.00	4.75	Fell Regulator & Odorizer to Sacramento Avenue Junction	16"	819	819	960	960
177	4.75	29.09	Sacramento Avenue Junction to Corning N. Dome Station	10"	819	819	960	960
177	0.00	2.19	Tap 27.60 to Tap 29.87 Parallel Section Near Corning N. Dome	6" & 8"	819	819	960	960
177	29.09	37.84	Corning N. Dome Station to Gerber Compressor Station	12"	819	819	960	960
177	37.84	163.04	Gerber Compressor Station to Cummings Creek PLS	12"	819	819	960	960

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
177	163.04	178.18	Cummings Creek PLS to Tompkins Hill Meter & Regulator Sta.	12"	430	430	720	720
177	178.18	192.29	Tompkins Hill Meter & Regulator Station to Ryan Slough Regulator Station	12"	350	425	600	600
177	37.8	149.18	Crosstie Between Lines 177 and Line 400	12"	819	819	960	960
177	43.87	1.24	Tap to Red Bluff and Diamond National	6"	819	819	960	960
177			Rancho Capay Field Collection System	4"	819	819	960	960
179			Corning Field Collection System	6"	819	819	960	960
180			Kettleman Hills Field Collection System	8" - 20"	421	421	500	500
181A	0.00	1.56	Soap Lake Meter Station to V 1.56	10"	300	300	400	400
181A	6.19	20.15	V-6.19 to Watsonville Meter Station	10" & 12"	300	303	400	400
181B	0.00	10.85	Anzar Road Meter and Regulator to Watsonville Meter Station	10",16",20"	400	400	400	400
*182	0.00	16.77	Serpa "Y" to V-81	4" - 12"	400	435	800	800
182	16.77	18.23	V-81 to Shell Chemical Meter Station	4" - 12"	435	435	800	800
*182	18.23	18.87	Shell Chemical Meter Station to Suisun Junction Meter Station	12"	435	435	600	800
182			Kirby Hills Field Collection System	3" - 8"	435	435	800	800
182			Suisun Field Collection System	2" - 6"	435	435	800	800

PG&E CO SHEET 14 OF 30 SHEETS

DRAWING NUMBER 086868 REV 0

MICROFILM

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
183	0.00	6.35	Firebaugh Regulator Station to Moffat Field Meter Station	3"	175	320	800	800
186	0.00	26.1	Dos Palos Meter Station to Red Top Regulator	3" 4" 6"	500	625	720	720
186	26.1	29.4	Red Top Regulator Station to Chowchilla Field	2" 3" 4"	500	960	960	960
187	0.00	22.58	San Ardo Field Meter Station to Jolon Road Regulator Station	6"	313	313	720	720
187	22.58	65.70	Jolon Road Regulator Station to Harkins Road Meter & Mixer Station	8"	313	313	720	720
189	0.00	1.72	Elk River Road Regulator Station to Humboldt Bay P.P.	10"	350	425	720	720
190	0.00	16.08	Kettleman Compressor Station to Coalinga Nose Storage Field	12" & 16"	2160	2160	2160	2160
190	16.08	16.22	Coalinga Nose Storage Field to Union Oil Company	16"	2160	2160	2160	2160
191	0.00	3.86	Antioch Terminal to Antioch Town Meter Station	30" & 34"	315	600	600	600
191			Antioch Town Meter Station Cross Tie	16"	315	600	600	600
191	3.87	9.93	MP 3.87 to MP 9.93 Via Pittsburg Power Plant	20" & 24"	315	390	600	600
191	9.93	25.30	MP 9.93 to Reliez Station Road Regulator Station	16" 20" &24"	315	338	600	600
*191	25.30	29.36	Reliez Station Road Regulator Station to Junction L-191	8" 10" & 12"	268	283	400	400

SHEET 15 OF 30 SHEETS

P G & E CO

DRAWING NUMBER 086868

REV 0

MICROFILM

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
*191	29.36	32.76	Junction Line 191 to MP 32.76	10"	268	270	400	400
*191	32.76	35.83	MP 32.76 to Martinez Meter and Regulator Station	10"	268	268	400	400
*191A			Junction Line 191 to Ardilla and Camino Pablo & Orinda Regulator Station	3" 6" & 8"	268	283	400	400
*191B	0.00	1.53	Junction Line 191 to Reliez Valley Road Regulator Station	8"	268	283	400	400
193			Rice Creek Field Collection System	2" - 8"	819	960	960	960
193			Malton Field Collection System	4",6",8"	819	960	960	960
193			Kirkwood & Rice Creek Field North Collection System	6"	819	819	960	960
194	0.00	4.39	McMullin Field Dehydrator Station to California Ammonia Company	6"	437	437	960	960
194			McMullin Ranch Field Collection System	2" - 10"	437	437	800	800
195			Rio Vista Field Collection System (HP)	2" - 16"	800 720 (9)	800	800	800
*195			Rio Vista Field Collection System (LP)	2" - 16"	510	510	800	800
196	0.00	13.45	Las Vinas Station to Isleton Meter Station	8" & 12"	800 (9)	800	800	800
197A	0.25	21.41	Las Vinas Station to MP 21.41	10"	385	388	720	720
197A	21.41	31.23	MP 21.41 to MP 31.23	10" & 12"	320	720 (10)	720	720
197A	31.23	39.57	MP 31.23 to MP 39.57	12"	320	320	720	720
197A	39.57	41.78	MP 39.57 to Calaveras Cement	8"	320	320	720	720

(9) The MOP of this section of line is 720 psig when it is operated in conjunction with L-131.

(10) After reviewing records and the requirements of Section 192.619 of G.O. 112-C, it has been determined that the 500 psig limitation of this section of L-197A did not exist, and the section of Line has an MAOP of 720 psig. The 720 psig MAOP of this section of L-197A was established by hydrostatic tests completed on 1/18/66 and 7/23/69.

SHEET 16 OF 30 SHEETS

P G & E CO.

MICROFILM

DRAWING NUMBER 086868

REV. 0

61-4344 Rev 1-76

LINE OPERATING AT OR OVER 20% SMYS

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
197B	0.25	5.50	Las Vinas Station to MP 5.50	6"	385	388	720	720
197B	21.47	31.24	V 21.47 to V 31.24	8"	320	320	720	720
197C	17.44	23.02	Ione Tap to MP 23.02	10"	385	720	720	720
199			Bunker Field Collection System	3" - 8"	792	796	800	800
200			W. Rio Vista Field Collection System (HP)	2" - 16"	800(9)	800	800	800
*200			W. Rio Vista Field Collection System (LP)	2" - 16"	510	510	800	800
200			W. Rio Vista Field Collection System (30 psig)	3" - 10"	400	510	800	800
200			Liberty Islands Field Collection System	4"	800 720(9)	800	800	800
200			Lindsay Slough Field Collection System	3" - 10"	800(9)	868	960	960
201			Todhunters Lake Field Collection System	2" - 12"	792	960	960	960
202	0.00	23.72	Grass Valley Tap to Regulator Station near Robin Avenue, Grass Valley	6" & 8"	400	720	720	600
203			Greens Lake Field Collection System	4"	500	800	800	800
204			Cheney Ranch Field Collection System	3" & 4"	500	890	890	890
206			Pleasant Creek Tap to Pleasant Creek Compressor Station	12"	975	1440	1440	1440
207			Conway Ranch Field Collection System	4", 6", 8"	800	1000	1000	1000

(9) The MOP of this section of line is 720 psig when it is operated in conjunction with L-131.

P G & E CO. SHEET 17 OF 30 SHEETS

DRAWING NUMBER 068688 REV 0

MICROFILM

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

PG&E CO.

SHEET 18 OF 30 SHEETS

DRAWING NUMBER 086868

REV. 0

MICROFILM

Trans. Line No.	MP	to	MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
208				Union Island Field to Lathrop Dehydrator Station	12"	825	1000	1000	1000
209				Line 400 to Line 128 at Willows	4"	479	720	720	720
210	0.00		1.40	Rio Vista "Y" to Creed Station	16"	737	800	800	800
210	1.40		25.98	Creed Station to Napa "Y"	16" & 18"	650	650	740	720
210	1.40		19.47	Creed Station to Cordelia Regulator Station	32"	650	675	675	675
210	19.47		25.62	Cordelia Regulator to Napa "Y"	10" & 12"	650	650	800	800
210	0.00		1.36	Rio Vista "Y" to Creed Station	10"	650	650	800	800
210	19.47		32.11	Cordelia Regulator to Herrmann Station	24"	650	675	675	675
210	0.00		3.7	V 27.67 to Exxon Oil Meter Station	18"	650	720	720	675
212				Tremont Field Collection System	4" & 6"	792	800	800	800
215	0.00		20.05	Oak Flat Road Meter to West Avenue Regulator Station	12"	500	890	890	890
220	0.00		2.41	Rio Vista "Y" to Maine Prairie Meter Station	16"	792	800	800	800
220	0.00		2.41	Rio Vista "Y" to Maine Prairie Meter Station	10"	510	796	800	800
220	2.41		22.01	Maine Prairie Meter Station to Davis Meter and Regulator Station	8",10",12"	792	796	800	800
220	22.01		34.46	Davis Meter & Regulator to Dunnigan Spreckels Regulator Station	6" & 8"	500	500	500	800

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

P G & E CO.

SHEET 13 OF 30 SHEETS

DRAWING NUMBER 086868

REV 0

MICROFILM

Trans. Line No.	MP	to	MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
300A	0.00		0.64	Colorado River to Topock Compressor Station	30" & 34"	660	700	700	700
300A	0.64		40.87	Topock Compressor Station to PLS 1A	34"	867	867	890	890
300A	40.87		103.72	PLS 1A to PLS 2A	34"	815	815	815	815
300A	103.72		130.37	PLS 2A to PLS 2AX	34"	688	688	688	688
300A	130.37		159.33	PLS 2AX to Hinkley Compressor Station	26" & 34"	573	573	573	573
300A	159.33		203.02	Hinkley Compressor Station to PLS 3A	34"	861	861	890	890
300A	203.02		256.21	PLS 3A to PLS 4A	34"	803	817	817	817
300A	256.21		299.01	PLS 4A to PLS 5A	34"	736	757	757	757
300A	299.01		353.85	PLS 5A to Kettleman Compressor Station	34"	669	688	688	688
300A	353.85		436.74	Kettleman Compressor Station to PLS 6A	34"	840	840	890	890
300A	436.74		461.07	PLS 6A to Pacheco Pass PLS	34"	715	715	715	715
300A	461.07		490.65	Pacheco Pass PLS to PLS 7A Silver Creek	34"	631	631	715	715
300A	490.65		502.34	PLS 7A to Milpitas Terminal Station	34"	558	558	676	676
300B	0.00		0.45	Colorado River to Topock Compressor Station	34"	660	660	735	735
300B	0.45		40.49	Topock Compressor Station to PLS 1B	34"	867	867	894	894
300B	40.49		103.51	PLS 1B to PLS 2B	34"	815	821	821	821
300B	103.51		130.40	PLS 2B to PLS 2BX	34"	688	688	688	688
300B	130.40		161.02	PLS 2BX to Hinkley Compressor Station	34"	573	573	573	573

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

SHEET 20 OF 30 SHEETS

P G & E CO

DRAWING NUMBER 086868

REV 0

MICROFILM

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
300B	161.02	203.07	Hinkley Compressor Station to PLS 3B	34"	861	861	897	897
300B	203.07	256.64	PLS 3B to PLS 4B	34"	803	816	816	816
300B	256.64	299.00	PLS 4B to PLS 5B	34"	736	757	757	757
300B	299.00	354.02	PLS 5B to Kettleman Compressor Station	34"	669	688	688	688
300B	354.02	436.85	Kettleman Compressor Station to PLS 6B	34"	840	840	890	890
300B	436.85	461.08	PLS 6B to Pacheco Pass PLS	34"	715	715	715	715
300B	461.08	490.92	Pacheco Pass PLS to PLS 7B Silver Creek	34"	631	631	715	715
300B	490.92	502.64	PLS 7B to Milpitas Terminal Station	34"	600	600(11)	669	669
301G	0.00	24.68	Hollister Meter Station to Moss Landing Power Plant	24" & 30"	500	500	500	500
301A	0.00	24.84	Hollister Meter Station to Moss Landing Power Plant	20"	396	396	500	500
301B	0.00	14.02	Dolan Road Meter Station to Hilltown Regulator Station	12"	408	408	600	500
*301C	14.02	17.20	Hilltown Regulator Station to Harkins Road Meter and Mixer Station	8" & 12"	313	313	500	500
*301F	0.00	7.94	Espinosa Road to Marina Regulator Station	16"	408	412	412	412
*301E	0.00	1.02	Crosstie - Monterey #2 to Main 301	12"	408	408	500	500
301D	0.00	1.72	Anzar Tap Station to Anzar Road Meter & Regulator Station	10"	500	500	500	500
301H	0.00	1.72	Anzar Tap Station to Anzar Road Meter & Regulator Station	16"	500	500	500	500

(11) Revised to conform to documented records.

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

Trans. Line No.	MP	to	MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Desing Press.	Future Design Press.
302				Sutter Buttes, W. Butte, Butte Slough, Grimes, Sycamore, Kirk, Moon Bend & Buckeye Field Collection System	2" - 20"	1000	1000	1000	1000
302	0.00		5.76	Buckeye Creek PLS to Hershey Junction	20"	975	975	1000	975
303	0.00		7.95	Antioch Terminal to Brentwood Terminal	36"	720	720	720	720
303	7.95		11.97	Brentwood Terminal to Vasco Road	36"	725	793 (11a)	864	864
303	11.97		20.43	Vasco Road to Dalton Avenue	36"	725	776 (11b)	864	864
303	20.43		25.54	Dalton Avenue to Livermore Junction	36"	725	864 (11c)	864	864
303	25.54		36.56	Livermore Junction to Sheridan Road PLS	36"	725	731 (11d)	877	877
303	36.56		42.86	Sheridan Road PLS to Irvington	36"	590	590	600	877
304	0.00		11.29	Tracy Station to Lathrop Dehydrator & Odorizer Station	12"	825	825	825	825
304				Lathrop Field Collection System	3" - 12"	825	825	825	825
306	0.00		43.3	Kettleman Compressor Station to Dry Creek PLS	20"	840	840	840	840
306	43.3		70.02	Dry Creek PLS to Morro Bay Power Plant	20"	650	650	840	840
307	0.00		16.36	Spreckels Sugar Meter Station to Spreckels Sugar Regulator	8"	500	500	915	890
307	12.05		16.92	Derrick Road Tap to Arbios Regulator Station	8"	500	890	915	890
311	0.00		54.44	Main 300 (V 180.64A) to Westend Primary Regulator Station	10" & 12"	700	700	960	890

(11a) The 793 psig MAOP of this Section of L-303 was established by hydrostatic test completed on 11/23/66.

(11b) The 776 psig MAOP of this Section of L-303 was established by hydrostatic test completed on 11/26/66.

(11c) The 864 psig MAOP of this new Section of L-303 was established by hydrostatic test completed on 11/22/77.

(11d) The 731 psig MAOP of this Section of L-303 was established by gas upgrating on 9/28/78.

P G & E CO SHEET 21 OF 30 SHEETS

MICROFILM DRAWING NUMBER 086868 REV 0

61-4344 Rev 1-76

LINES OPERATING AT OR OVER 20% SMYS

PG&E CO. SHEET 22 OF 30 SHEETS

DRAWING NUMBER 086868 REV. 0

MICROFILM

Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
311	31.97	38.49	Parallel Section to MP 38.49	12"	700	810	960	890
312	0.00	8.00	Line 300A (T 273.27) to Paloma Field Meter Station	8"	736	740	820	820
313	0.00	34.4	Lucerne Valley Tap Meter Station to Permanente Company Meter	8" & 10"	573	573	720	720
314	0.00	24.19	Hinkley Compressor Station to MP 24.19	12"	861	861	890	890
*314	24.19	29.00	MP 24.10 to MP 29.00	10"	293	293	720	720
*314	29.00	43.18	MP 29.00 to Black Mountain Meter and Regulator Station	8" & 10"	293	293	720	720
*314			Tap to Riverside Cement	8"	293	293	720	720
*314			Tap to Airbase Road Meter Station	8"	293	293	720	720
*316			Dutch Slough & River Break Field Collection System	2" - 12"	800	800	800	800
317			Chickahominy Field Collection System	3"	975	975	975	975
318			Black Butte Field Collection System	3"	911	911	960	960
331			Santa Nella Tap to Tri Valley Growers	4" & 6"	500	890	890	890
334			Poppy Ridge Field	4"	412	490 (12)	800	800
336			Harte Field Collection System	3"	412	800	800	800
372	0.00	3.7	Ridgecrest Tap to Ridgecrest Primary Regulator	6"	700	700	960	960
400	0.00	24.60	California-Oregon Border to Tionesta Compressor Station	36"	911	911	911	911

(12) Line 334 is a new line. The 490 psig MAOP was established by hydrostatic tests completed on 3/27/78.

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Trans. Line No.	MP	to MP	Description	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
400	24.60	48.64	Tionesta Compressor Station to Indian Springs PLS	36"	911	911	911	911
400	48.64	82.33	Indian Springs PLS to Burney Compressor Station	36"	911	911	911	911
400	82.33	104.20	Burney Compressor Station to MP 104.20	36"	911	911	911	911
400	104.20	115.26	MP 104.20 to Shingletown PLS	36"	911	915	942	942
400	115.26	149.18	Shingletown PLS to Gerber Compressor Station	26" & 36"	911	911	911	911
400	149.18	180.77	Gerber Compressor Station to V-180.77	24" & 36"	911	911	911	911
400A	180.77	197.83	V 180.77 to Delevan Compressor Station	36"	911	911	911	911
400B	180.76	197.72	MP 180.76 to Delevan Compressor Station	36"	911	911	911	911
400	197.72	233.87	Delevan Compressor Station to Buckeye Creek PLS	36"	1040	1040	1040	1040
400	233.87	298.87	Buckeye Creek PLS to Antioch Terminal	26" & 36"	975	975	975	975
402	0.00	9.96	Redding-Calaveras Tap to PLS	12"	300	300	865	865
402	9.96	38.10	PLS to Calaveras Cement Tap	8",10" & 12"	300	300	720	720
403	0.00	1.38	Rio Vista "Y" to Creed Station	16"	650[13]	800	855	800

[13]The MOP of L-403 is 650 when operated in conjunction with L-210.

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

**DP has been established as the maximum pressure for the minimum wall thickness required under the current edition of General Order 112-C for Type 3 construction for line size listed.

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LINES OPERATING AT OR OVER 20% SMYS

Location	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
COAST VALLEYS DIVISION					
Monterey #1 - Harkins Road Meter & Mixer Station to Fig-Frank Streets Regulator Station	8" & 12"	313	313	500	400
Monterey #2 - Fort Ord to Fig-Frank Streets Regulator Station	10" 12" 16"	313	313	400	400
Monterey (V-18.65 to Carmel V-2.13) Aquajito Road Regulator Station	8" & 10"	313	313	500	400
Harkins Road Meter and Mixer Station to MP 2.45	8" & 10"	313	313	500	500
MP 2.45 to MP 3.50	8"	313	313	500	500
MP 3.50 to California Street Regulator Station	8"	313	313	500	500
Salinas Main - Foster Road to San Miguel Avenue	8"	313	313	500	500
DFM-6 Espinosa Road Main from 301-B, V-3.18	6"	408	500	720	500
DFM-7 Union Carbide Main from 187, MP 17.42	3"	313	313	720	870
DFM-8 Paradise Road to Meridian Road Main	4" & 6"	500	500	720	500
COLGATE DIVISION					
Yuba City HPU Holder to Market Street Regulator Pit	6" & 8"	135	135	400	400
Tap to Schohr Ranch	6"	250	250	720	720
Tap to Strain Ranch Dryer	4"	800	800	800	800
DE SABLA DIVISION					
Butte College Tap	3" & 4"	400	720	720	720
Orland Tap from L-177 to Second Stage Regulator	6"	490	490	720	720

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LINES OPERATING AT OR OVER 20% SMYS

Location	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
DRUM DIVISION					
Diamond Oaks Feeder	6"	500	500	500	600
EAST BAY DIVISION					
Avon Power Station Feeder	8" & 12"	315	338	600	600
Lion Oil Company Feeder	12"	315	338	600	600
Nichols Road Tap	4"	315	338	600	600
Pacific States Steel Feeder	12"	420	420	500	500
Warm Springs Feeder	2" & 4"	465	465	500	600
Port Costa Feeder	6"	315	338	600	600
50th Avenue Holder Feeder Off Line 105	16" & 20"	150	198	275	275
Pittsburg Town Feeder	12"	315	338	350	600
Concord Feeder to Alpha Beta Regulator	6" & 8"	315	600	600	600
Oleum Steam Plant Tap	8" 10" 12" 16"	250	250	275	275
San Ramon Feeder	16"	500	500	500	600
Standard Oil Feeder	22"	400	400	400	400
Rodeo Feeder	6" & 8"	204	204	400	400
Concord Feeder	8" 10" 12"	170	170	600	600
Antioch Feeder	6"	315	600	720	720
Danville Feeder	6" 8" 10"	315	338	600	600
Discovery Bay Feeder - From Line 57A to Secondary Stage Regulator (Bixler Road)	3" & 4"	867	867	867	867
Discovery Bay Feeder - From Bixler Road Regulator to Pt. of Timber Regulator	4" 6" 8"	400	400	400	400
Atlas Road Feeder	8"	400	400	400	400

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LINES OPERATING AT OR OVER 20% SMYS

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Location	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
NORTH BAY DIVISION					
Cotati Feeder	8"	450	500	675	675
12" Line 21 (V-16.15) to Pine Street Meter Station	8"	450	500	675	675
12" Line 21 (V-16.15) to Kilburn Regulator Station	10"	450	500	675	675
Kilburn Regulator Station to Rutherford	8" & 10"	450	500	675	675
6" Sonoma Tap Line	6"	450	500	675	675
Tap to Kaiser Steel East of Napa River	4"	450	500	675	675
Line 21-S, V-4.59 to V-4.63	8"	450	500	500	500
SACRAMENTO DIVISION(14)					
16" L-108 to Galt Primary Regulator	4"	490	490	500	720
*Sacramento Division Gas Load Center to North Sacramento Holder	8" & 12"	260	260	275	275
16" L-108 Tap to Sacramento Boulevard Regulator	10",12",16"	412	412	500	656
L-108 to Florin Road Primary	6" & 10"	412	412	500	656
Union Carbide Tap to Union Carbide Corp.	8" & 10"	412	412	500	656
L-108 to Florin Road and Woodline Avenue	6"	412	412	500	656
Sutterville Road to 43rd and Riverside	6" & 8"	412	412	500	656
L-108 to Elk Grove Primary	4"	412	412	500	656
Tremont Tap to Dixon Meter Station	6"	750	750	800	800
Hunts Feeder Main	6"	500	500	500	800
Fairfield - Knolls Feeder	4"	500	500	500	800
Illinois Street 10" Feeder	6" & 10"	650	675	740	720
Gibson Feeder Main	6"	500	500	500	800

(14)A number of DFMs have been added by Sacramento Division because of operation at pressure of 20% or more of SMYS.

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LINES OPERATING AT OR OVER 20% SMYS

Location	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
Sacramento Division (Continued)					
American Home Foods Feeder	2" & 4"	720	720	720	720
Vacaville Feeder	6"	400	400	400	400
Vacaville - Eldridge to Nut Tree Road	6"	400	400	720	720
Vacaville - Travis to Vacaville Junction	3", 4", 6"	400	400	400	400
Vacaville - SNRR to Elmira Road	3" & 6"	400	400	400	720
Anheuser Busch Feeder	2" & 4"	650	650	720	720
Fairfield Feeder - Scandia Road - Vaca Tap	10"	675	675	675	675
Fairfield Feeder - Scandia Road - Vaca Tap	12"	650	650	740	740
Robben Road Feeder - Dixon	6"	750	750	800	800
SAN FRANCISCO DIVISION					
Peninsula Main	16" & 20"	109	110(14a)	275	275
Hunters Point Power Plant Feeder	20"	145	145	275	275
SAN JOAQUIN DIVISION					
Tranquility Feeder	3"	650	800	900	900
Yosemite Avenue Feeder	6"	400	720	720	720
Snelling Highway Feeder	6"	400	400	400	720
Dixon Dryer Feeder	4"	500	500	720	720
Peach and Central Feeder	6"	650	720	720	720
Clovis Feeder Main	6" & 12"	650	650	720	720
Vinewood Avenue Feeder	4"	400	720	720	720

(14a) Revised to conform to documented records.

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LINES OPERATING AT OR OVER 20% SMYS

Location	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
San Joaquin Division (Continued)					
Winton Avenue Feeder	6"	400	720	720	720
Elm Avenue Feeder	8"	263	263	400	400
US Borax Feeder	4" & 6"	490	490	720	720
Cressey Way Feeder	4" & 6"	400	400	720	720
Valley Nitrogen Feeder	6"	650	650	800	720
Ashland Avenue Feeder	4" & 6"	400	593	720	720
SAN JOSE DIVISION					
Half Moon Bay Feeder Line	8" 10" 12"	400	577	577**	577**
Santa Cruz to Davenport	10" & 12"	300	303	557**	400
Milpitas Terminal to PLS #7, Kings Road, 20" Feeder	16" 20" 30"	200	200	275	526
Watsonville to River Street Regulator Station	8" & 10"	300	303	577**	400
Watsonville to Rob Roy Junction	10"	300	400	577**	400
SHASTA DIVISION					
Simpson Lee Paper Mill Feeder	6"	300	300	720	720
U. S. Plywood Plant Feeder	4"	300	720	720	720
Enterprise Town Feeder	4" & 6"	300	300	720	720
Calaveras Cement Company Feeder	8"	300	300	720	720
Red Bluff District Tap	2"	911	911	911	911

**See Paragraph 6

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LINES OPERATING AT OR OVER 20% SMYS

Location	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
STOCKTON DIVISION (15)					
Valley Tomato Trunk Line	8"	412	500	720	720
Eight Mile Road Trunk Line	4" & 8"	412	412 (16)	720	720
Ripon-Modesto Feeder (Parallel)	8" & 12"	408	408	720	720
Dale Road to North Avenue Feeder	4", 6", 8", 12"	408	408	720	720
Riverbank Feeder	8" & 10"	408	408 (16)	720	720
Carpenter Road Feeder (Modesto)	4" & 12"	408	500	720	720
Modesto Feeder Via Pauline Boulevard	4" & 6"	408	408	720	720
Turner Road Feeder	8"	300	720	720	720
Turner Road Feeder (Parallel)	4" & 6"	300	300	720	400
McArthur Road Feeder	4"	295	295	400	400
Louise Avenue Feeder	8"	408	408	720	720

(15) A number of DFMS have been deleted by Stockton Division because of operation at pressures less than 20% of SMYS.

(16) Revised to conform to documented records.

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LINES OPERATING AT OR OVER 20% SMYS

Location	Length (Feet)	Nominal Pipe Diameter (Inches)	PG&E MOP psig	MAOP	Design Press.	Future Design Press.
COLGATE DIVISION						
Yuba City	24,784	34"	525	525	550	550
NORTH BAY						
San Rafael	37,392	30"	625[18]	650	690	690
SACRAMENTO DIVISION						
Sacramento	78,452	34"	445	445	550	550
SAN JOAQUIN DIVISION						
Fresno	43,722	30"	650[18]	690	690	690
SAN JOSE DIVISION						
Santa Cruz	7,221	30"	618	618[19]	618	660
	4,838	34"	618	618[19]	618	660

[18] The MOP is lowered pending a hydrotest to confirm MAOP.

[19] Revised to conform to documented records.

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