Memorandum

Date: November 25, 1998 **File #:**

To: VARIOUS

From: GAS SYSTEM MAINTENANCE & TECHNICAL SUPPORT

Subject: MAOP of Lines Operating at or over 20% SMYS

Pacific Gas and Electric Company

DISTRICT SUPERINTENDENTS

Attached for your use and distribution is Revision 10 to PG&E Drawing 086868, "Pipeline - Data Sheet, Maximum Allowable Operating Pressure (MAOP) of Lines Operating At or Over 20% SMYS."

PG&E Drawing 086868 lists the Maximum Operating Pressure (MOP), MAOP, and Future Design Pressure (FDP) of backbone and local transmission pipelines, Distribution Feeder Mains (DFM), and pipe-type high pressure gas underground holders operating at or over 20% SMYS. Revision 10 is the first major update to be issued since 1990. The major changes from the previous version of the document are: 1) pipeline and operating pressure data have been updated, 2) the original pipeline design pressure (DP) column has been eliminated, and 3) notes and definitions have been added or greatly expanded.

Currently, the old naming convention is used to identify the DFMs in this document. Once the DFMs are inputted into the GIS, we expect to convert to the same DFM naming convention used by GIS. We also plan to eventually list all DFMs in this document, even those operating at less than 20% SMYS.

As described in DCS Standard D-S0430 / GTS Standard S 4125, "Maximum Allowable Operating Pressure, Requirements for Distribution Systems and Transmission and Gathering Lines", GSM&TS will be next revising and reissuing this document on or before March 15, 1999.

PG&E Drawing 086868 will also be available on-line through "G.S.Info System" and the new GSM&TS intranet website.

If you have any question about this document, please call me at 583-4312 or Rich Arita at 583-4313.

Susan Chwistek

SUSAN CHWISTEK

RTA(583-4313):ra

Attachment

PURPOSE

This drawing lists the operating limitations and design pressure requirements of backbone and local transmission pipelines, distribution feeder mains (DFMs), and pipe-type high pressure gas underground holders operating at or above 20% of the Specified Minimum Yield Strength (SMYS) of the pipe.

This drawing is intended to assist Gas System Operations and GSM&TS in the operations, planning, and pipeline maintenance, repairs, and upgrades.

REFERENCE

See DCS/GTS Standard D-S0430 / S 4125 for requirements for establishing and revising the MAOP and MOP of pipeline facilities listed in this drawing.

CHANGES AND CORRECTIONS

Changes and corrections to the information contained in this drawing should be sent to:

Director, System Integrity
Gas System Maintenance & Technical Support Department
375 N. Wiget Lane, Walnut Creek, CA 94598

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Appvd	By	Rev	Date	Description	Dwn	Chkd	Supv	Appvd
JKY								
	CJT	10	9/17/98	Updated data, removed DP column, added gen'l notes.		RJK		

GM	
Supv	
Dsgn	
Dwn	
Chkd	
OK	
Date	Scale
4-9-79	

PIPELINE - DATA SHEET
MAOP OF LINES OPERATING AT OR OVER 20% SMYS
TYPICAL

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

B/M	
Dwg List	
Supsds	
Supsd By	
Sheet No 1 of 22 Sheets	
DRAWING NUMBER	REV
086868	10
Microfilm	

DEFINITIONS

Maximum Operating Pressure (MOP) is the maximum pressure at which a gas pipeline system may be operated in accordance with the criteria established in DCS/GTS Standard D-S0430/S 4125.

Maximum Allowable Operating Pressure (MAOP) is the maximum pressure at which a pipeline, pipeline segment, or component is qualified to operate in accordance with the requirements of 49 CFR Part 192.

Future Design Pressure (FDP) is the pressure to which future additions or changes to existing facilities are to be designed and tested.

GENERAL NOTES

1. Beginning and ending milepoints are shown for pipelines and pipeline segments. Milepoints are not currently assigned to DFMs or for collection systems.

2. Notes on MOP limitations are provided in cases where additional information is needed to clarify the reasons or operating circumstances for the limitation. The notes do not address all possible pipeline configurations (e.g., at cross-ties). The information in this drawing should be used in conjunction with operating maps and diagrams to determine operating limitations for specific pipeline configurations or operating scenarios.

3. The MAOP shown is the minimum MAOP for that pipeline or pipeline segment. Sections of the pipeline or sections within a particular pipeline segment may be qualified for a greater MAOP. Consult the appropriate pipeline survey sheet(s) to verify MAOPs prior to designing modifications.

4. For continuity, a number of transmission lines and DFMs that are operating less than 20% SMYS are included in the table. These transmission lines and DFMs are designated by an asterisks (*).

MAOP OF NUMBERED TRANSMISSION LINES

Line Number	MP	to	MP	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
2	39.81		129.10	MP 39.81 (north of Panoche Station) to Vernalis Tap	26,36	890	890	890
2	129.10		142.50	Vernalis Tap to Tracy Station	26	890	890	890
2	142.50		158.00	Tracy Station to Brentwood Terminal	26	890	890	890
21A	12.05		31.84	Napa "Y" Meter Station to V31.84	8,12,24,26	450	450	675
21B	0.00		18.64	Napa "Y" Meter Station to Adobe Meter Station	12,16	450	450	720
21C	34.84		35.86	McDowell Rd Tap to Petaluma Reg. Sta.	12	450	450	675
21C	31.84		53.12	Adobe Meter Station to Santa Rosa Compressor Sta.	12,16,20	450	450	675
21D	18.64		31.84	Adobe Meter Sta. to Laguna de Santa Rosa (Tap 44.90-21C)	16	450	500	675
21D	0.00		1.15	Hearn (Tap 49.05) to Sebastopol Rds (Tap 50.19)	12,16	450	675	675
21E	53.12		137.38	Santa Rosa Compressor Station to Willits	8,10,12,16	720	720	720
21F	0.00		21.11	Adobe Meter Station to San Rafael Underground Holder	12,16,20	450	500	500
21G	0.00		20.82	Adobe Meter Station to San Rafael Underground Holder	12,16,20	450	500	500
21H	0.00		1.07	Crockett Station to MP 1.07	24,26	405	405	675
21H	1.07		1.52	MP 1.07 to Herrmann Station	24	405	675	675
21H	1.52		2.65	Herrmann Station to MP 2.65	12,16	250	375	585
21H	2.65		2.71	MP 2.65 to Vallejo Station	16	250	258	585
21H	2.71		12.05	Vallejo Station to Napa "Y"	12,16	250	275	585
*50	0.00		2.87	MP 0.00 (near Marysville Service Center) to Yuba City UG Holder	8, 12	250	375	585
*50	0.00		16.93	Yuba City UG Holder to Gridley Junction Station	8	250	250	720
*50	0.00		26.94	Gridley Junction Station to Richvale "Y"	6,8	250	250	720
*50	26.94		44.87	Richvale "Y" to Butte Station	6,8,10,12	400	400	720
50	0.00		7.81	MP 0.00 to Paradise	8	400	720	720
56				Pleasant Creek Storage Field	4	1300	1300	1440
56				Pleasant Creek Storage Field	4,8	1300	1440	1440
57				McDonald Island Field UG Storage System	4-12	2160	2160	2160
57A	6.34		16.64	Old River PLS to Brentwood Terminal	10,14,16,18	722	722	867
57B	0.00		16.46	Brentwood Terminal to McDonald Is. Field UG Storage	22	2160	2160	2160
65				SP3 (TI 76.70) to Los Medanos Compr. Sta.	12,20,22	600	720	720
65				Los Medanos Field Storage System	4,20,22	1800	1800	1800
100	138.43		153.13	MP 138.43 to MilpitasTerminal	20	375 (8)	400	400
101	0.00		33.68	Milpitas Terminal to Lomita Park Reg. Sta.	20,24,30,34,36	375 (8)	400	400
*101	33.68		44.55	Lomita Park Reg Sta to San Francisco Gas Load Center	20,24	145 (1)	275	275
*103	0.00		23.55	Bolsa Meter & Reg Sta to California St. Reg Sta	12	350	350	500
*103	23.55		27.38	California St. Reg Sta to Harkins Rd. Mtr & Reg Sta	8,10,12	313	313	500
*105A	0.00		52.01	V-0.00 to San Pablo Station	20,24,30	150	198	275

MAOP OF NUMBERED TRANSMISSION LINES

Line Number	MP	to	MP	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
105B	0.00		11.80	Crockett Station to San Pablo Station	24	405	473	675
105B	0.00		0.67	Crockett Station to Crockett Cogeneration Meter Station	16	405	675	675
105N	0.00		0.18	Baine Avenue Crossover to Line 153	12,20	250	250	500
105N	0.00		1.29	West Winton Ave Crossover to Line 153	16,22,24	250	250	500
105N	6.88		23.03	Irvington Sta to San Lorenzo Reg Sta	20-34	250	250	500
*105N	23.03		36.48	San Lorenzo Reg Sta to Oakland Gas Load Center	16,20,24-34	150	198	275
107	0.00		13.11	Tracy Station to Livermore Junction	22,24	477	500	720
107	13.11		31.22	Livermore Junction to Irvington Station	22,24,36	477	477	720
107S	31.22		33.20	Irvington Station to MP 33.2	22,24	477	477	720
107S	33.20		38.12	MP 33.2 to Milpitas Station	36	477	720	720
108	0.00		4.59	Vernalis Tap & Meter Sta. to Vernalis Field Mixing Sta.	12,16,22	500	500	890
108	4.59		8.79	Vernalis Field Mixing Sta to McMullin Ranch Mixer Sta	16,24	408	408	720
108	8.79		14.00	McMullin Ranch Mixer Station to MP 14.0	16	408	408	720
108	14.00		22.31	MP 14.0 to MP 22.31	24	408	720	720
108	22.31		36.01	MP 22.31 to MP 36.01	24	412	720	720
108	36.01		43.50	MP 36.01 to Las Vinas Station	16	412	412	720
108	43.50		50.70	Las Vinas Station to Thornton Meter Sta.	16	412	490	720
108	61.67		75.10	Elk Grove-Clarkson Primary Sta to Sacramento Gas Load Center	16,20,24	412	412	720
*108	27.10		1.72	Airport Way & Sonora Street Valve Lot to Stockton Gas Load Center	12	188 (2)	188	400
109	0.00		43.47	Milpitas Terminal to Sullivan Ave Reg Sta	22,24,30,34	375	375	400
*109	43.47		52.71	Sullivan Ave Reg Sta to San Francisco Gas Load Center	24,26,30,34	145 (1)	150	275
111	0.00		21.64	Helm Junction to Fresno Junction	12,16	650	650	720
111	21.65		28.05	Fresno Junction to Fresno Gas Load Center	8	400	400	720
111				Raisin City Field Collection System	4	650	800	800
111				San Joaquin Field Collection System	3,4	650	800	960
112				Vernalis Field Collection System	3-8	594	594	890
114	0.00		9.01	Rio Vista Field West Side to Antioch Terminal	12,16	510	510	800
114	7.33		8.31	San Joaquin River X-ing Block Valve 7.46 on SP4 to Block Valve 8.31 on Line 114	12	720 (3)	800	800
114	9.01		16.59	Antioch Terminal to Brentwood Terminal	20,22,24	497 (4)	497	720
114	16.59		28.97	Brentwood Terminal to Livermore Junction	22,24,36	497 (5)	595	720
115				Petaluma Gas Field	2	450	675	675
116	0.00		0.02	West Sacramento Crosstie to Line 172	12	500	520	720
*116	0.00		3.86	Davis Mtr and Reg Sta to Swingle Jct Mtr and Reg Sta	8	500	500	500

MAOP OF NUMBERED TRANSMISSION LINES

Line Number	MP	to	MP	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
*116	3.86		6.18	Swingle Junction Meter and Reg Sta to MP 6.18	16	500	800	720
116	6.18		9.60	MP 6.18 to MLV-9.60	16	500	720	720
116	9.60		12.89	MLV-9.60 to Sacramento Gas Load Center	24	500	500	720
*118A	0.00		6.09	Fresno Gas Load Center to Fresno Junction	8	400	400	500
*118A	5.86		12.57	Fresno Junction to MP 12.57	12	400	400	720
*118A	12.57		73.26	MP 12.57 to Livingston Reg Station	8,12	400	400	500
118A	73.26		74.89	Livingston Reg Station to Collier Road	6,12	400	720	720
118A	74.89		83.74	Collier Road to Bradbury Road Reg Station	6,8	400	400	720
118B	0.00		38.39	Tap 12.55 to Athlone - 12" Parallel	12	400	400	720
118D	78.08		83.79	MP 78.08 to Bradbury Road Reg Station	8	400	720	720
118E	83.74		84.69	Bradbury Road Reg Sta to MP 84.69 (Line 215 Tap) Parallel	6,8	500	890	890
119A	0.00		3.85	Davis Mtr Sta to Swingle Junction Reg and Mtr Sta	12	792	792	800
119A	3.85		4.85	Swingle Junction Reg and Meter Sta to MP 4.85	12,16	500	720	720
119A	4.85		16.46	MP 4.85 to North Sacramento UG Holder	10,12,20	500	520	720
119B	0.00		10.17	N. Sacramento UG Holder to Antelope Meter Station	12,16	500	500	600
119C	0.00		6.69	N. Sacramento UG Holder to Roseville Rd. Reg Station	16	500	500	600
119D	0.00		5.25	Sonoma Ave and Del Paso Blvd Reg to Roseville Rd Reg Sta	6	180	500	500
120				Sutter Creek Field Collection System	4,6	485 (6)	492	720
120				Sutter Buttes Field Collection System	4,6	485	485	720
121	0.00		6.97	Marysville Buttes Mtr Sta to Township and Almendra	6	485	485	975
121	6.97		9.05	Township and Almendra to Butte House w/o Elmer	8	485	975	975
121	9.05		10.61	Butte House w/o Elmer to W. Onstott Rd	8	720	720	720
121	10.53		11.73	E. Onstott Rd. To Yuba City UG Holder Sta	8	485	720	720
123	0.00		13.57	Antelope Mtr Sta to Lincoln Junction Reg Sta	12,16	500	500	670
124	0.00		23.46	Lincoln Jct Reg Sta to MP 23.46 (near Marysville Service Center)	8,10	400	400	720
124	0.00		26.03	Lincoln Jct Reg Sta to Yuba City UG Holder	12,16	600	600	720
124	0.00		2.87	Beale AFB Tap (Tap 13.31) to Camp Far West Mtr Sta (Tap 2.87)	6	480	600	720
124	2.87		3.76	Camp Far West Mtr Sta to Beale AFB Reg. Sta.	4,6	480	480	720
125				Edwards Vicenus to Tompkins Hill Mtr and Reg Sta	4	350	448	720
125				Tompkins Hill Field Collection System	2-6	448	448	720
126	0.00		3.62	Elk River Road Reg Sta to Tap 12.38, Line 126	10	167	167	600
126	10.89		12.61	Union St. Reg Station to Line 137	6	167	167	275
126A	0.00		10.89	Tompkins Hill Mtr & Reg Sta to Union St. Reg Sta	6	350	425	425
126B	0.00		10.57	Tompkins Hill Mtr & Reg Sta to Union St. Reg Sta	4	350	425	425

MAOP OF NUMBERED TRANSMISSION LINES

Line Number	MP	to	MP	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
126C	0.00		3.60	Elk River Road Reg Sta to Tap 12.38, Line 126D	10	167	167	600
*126D	12.22		12.57	Tap 12.22 on Line 126A to Eureka Meter & Reg Sta	10	167	167	600
128	0.00		13.65	Perch Slough (V-1.65) to Willows Reg Sta	3,4,6	479	720	720
130A	0.00		0.50	HP Rio Vista Sacramento River Crossing	10	800	800	800
130B	0.00		0.50	LP Rio Vista Sacramento River Crossing	10	510	510	720
131	0.00		0.71	Rio Vista Field East Side	12	510	685	720
131	0.00		9.19	Rio Vista Field East Side to Antioch Terminal	10,12	720 (7)	720	720
131	13.33		16.87	MP 13.33 to Brentwood Terminal	24	495	495	720
131	16.87		20.88	V-16.87 (Brentwood Terminal) to V-20.88 (at Vasco Rd)	24	500	525	650
131	25.10		50.57	Tap 25.10 on Line 114 to Irvington Station	24	500	525	650
131	50.57		57.45	Irvington Station to Milpitas Terminal	30,34	590	595	650
132	0.00		46.59	Milpitas Terminal to Martin Station Reg Station	24,30,34,36	375 (8)	390	400
132	46.59		51.50	Martin Sta Reg Sta to San Francisco Div Gas Load Ctr	24	145	145	275
132A	0.00		1.50	Sierra Vista Ave Crossover to Rengstorff Ave Sta	16,24	375 (8)	400	400
132B	0.00		0.35	Martin Sta Reg Sta to Geneva Ave	20,24	145 (9)	275	275
133				Gill Ranch Field Collection System	4,6	500	500	720
134	0.00		34.14	Herndon Junction to Firebaugh Reg Sta	3,4,6,8	500	500	720
134	T-21.62			Tap 21.62 to Moffat-Dixon Meter Station	4	500	500	720
136	5.14		12.89	Fell Reg and Odorizer Station to Butte Station	6,8	550	550	720
*137	0.00		11.83	14th and Albee Street, Eureka to Arcata Reg Station	4,6	167	167	275
137	3.58		7.37	Ryan Slough Reg Station to Arcata Reg Station	8	350	350	600
138	14.71		20.50	Helm Junction to Elkhorn Station	18	800 (10)	865	890
138	20.50		22.04	Elkhorn Station to Burrel Meter Station	18	650	650	720
138	22.04		38.59	Burrel Meter Station to Adams & Elm Meter and Reg Sta	16	650	650	720
138	38.59		49.42	Adams & Elm Mtr & Reg Sta to Fresno Gas Load Center	10,12,16	650	650	720
138	43.58		50.02	Tap 43.58 to Chestnut & Clay Reg Station	16	650	650	720
138	45.10		46.64	MP 45.10 to Peach Avenue	10	650	720	720
138A	0.00		14.94	Helm Tap Station to Helm Junction	16	800 (10)	862	862
138B	0.00		14.71	Helm Tap Station to Helm Junction	20	700	700	890
141E				E. Thornton Field Collection System	4,6	412	538	800
141W				W. Thornton Field Collection System	3-10	412	768	800
*141				NE River Island & Walnut Grove Field Collection System	6,8	412	768	800
142N	0.00		14.05	Bakersfield Tap to Bakersfield Reg Station	12,16,20,24	475	475	720
142S	0.00		9.00	Gosford Road Mtr Sta to Brundage Lane & "V" St. Reg	6,10	600	600	720
*142S	9.00		11.47	Brundage Lane & "V" St. Reg to Bakersfield Reg Sta	8,12	300	300	720
*143				Millar Field Collection Systen	3,4	792	800	800

MAOP OF NUMBERED TRANSMISSION LINES

Line Number	MP	to	MP	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
144	0.00		3.50	Millar Field to Millar Meter Station	10,12	792	796	800
145				Maine Praire Field Collection	3,4,6	510	796	800
146	0.00		6.00	Maine Prairie Field to Maine Prairie Meter Station	8	510	796	800
147	0.00		3.57	Edgewood Rd. Crossover to V-3.57	20,24	375	400	400
148	0.00		17.63	McMullin Ranch Mixer Station to Morgan Rd. Reg Sta	8	408	408	720
149				Winters Field Collection System	4,6	720	750	800
150	0.00		18.09	Winters Meter Station to Davis Meter Station	6	720	750	800
151	0.53		14.05	MP 0.53 to Afton Reg Station	6	250	250	720
153	0.00		18.00	Irvington Station to Marina Blvd Station	24,30,34	420	420	500
*153	18.00		27.83	Marina Blvd Station to Oakland Gas Load Center	16,20,24,30	246	246	275
153				Alvarado Crossover & Reg Station to Line 105	16	246	250	500
*153				Fairway Ave Crossover Station to Line 105	20,30	150	198	500
155				Durham Field Collection System	4	680	680	800
156	0.00		5.72	Durham Field to Durham Field Meter Station	6	680	680	800
158	4.80		11.06	V-4.80 to L-172 (MP 11.06)	6	800	800	800
158	11.06		13.65	MP 11.06 to Dunnigan Spreckels Reg Station	6	500	564	800
158				Woodland Field Collection System	3,4	800	800	800
159	0.00		0.65	Pleasant Creek Field Compressor Station to V-0.65	4	975	975	975
159	0.65		3.91	V-0.65 to Pleasant Creek Line 159 Reg Station	4	975	975	975
159	3.91		4.70	Pleasant Creek Line 159 Reg Sta to Winters Meter Sta	4,8	720	750	975
159				Winters Field Collection System	4	720	750	975
162	0.00		6.61	Tracy Station to Holly Road (V-6.61)	6,10	365	720	720
*162	6.61		9.03	Holly Road (V-6.61) to Banta Reg Station	8	365	365	720
164	0.00		6.14	Coalinga Tap to MP 6.14	8,10,16	498	498	890
167	0.00		34.50	Beehive Bend Field to Yuba City UG Holder	12,16	800	800	800
167	0.00		4.60	Wild Goose Field Meter Sta to Wild Goose Mixer Station	10	800	800	800
167	4.60		6.54	Wild Goose Mixer Sta to Gridley Jct Sta	8	800	800	800
167				Wild Goose Field Collection System	4	800	800	800
167	4.12		7.60	Princeton Field Collection System	3	800	800	800
167				Compton Landing Field Collection System	3,4,6	800	800	800
167				Bounde Creek Field Collection System	2-6	800	800	800
168				River Island Field Collection System	2-8	800 (11)	800	800
169				Beehive Bend, Willows, Llano Seco & Perkins Lake Field Collection System	3-20	800	800	800
172	0.00		69.81	West Beehive Bend Meter & Odorizer Sta to Swingle Junction Reg & Mtr Station	18,20	800	800	800

MAOP OF NUMBERED TRANSMISSION LINES

Line Number	MP	to	MP	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
172				Sugarfield Field Collection System	2-4	800	800	800
172				Dufour Field Collection System	3,4	800	800	800
172	69.81		79.12	Swingle Junction Reg & Mtr Station to Sacramento Gas Load Center	12,16,18	500	520	720
172	0.00		0.60	Crosstie between Line 172 (V-3.54) and Line 167 (V-4.12) Collection System	6,10	800	800	800
172	75.45		9.68	Crosstie between Line 172 (V-75.45) and Line 119 (V-9.68)	12	500	520	720
*173	0.00		17.56	Turkey Ranch Meter Station to Auburn Reg Station	4,6,8,12	500	500	670
*174				Arbuckle Field Collection System	2-10	800	800	800
177	0.00		0.86	Sacramento Ave Junction to Grape Way Reg Station	10	819	819	960
177	0.86		7.13	Grape Way Reg Station to Butte Station	6,10	469	469	720
177	0.00		4.75	Fell Reg & Odorizer to Sacramento Ave Junction	16	819	819	960
177	4.75		29.09	Sacramento Ave Junction to Corning N. Dome Station	10	819	819	960
177	0.00		2.19	Tap 27.60 to Tap 29.87 Parallel Section Near Corning N. Dome	6,8	819	819	960
177	29.09		37.84	Corning N. Dome Station to Gerber Compressor	12	819	819	960
177	37.84		163.04	Gerber Compressor Sta to Cummings Creek PL Station	12	819	819	960
177	163.04		178.18	Cummings Creek PL Station to Tompkins Hill Mtr & Reg Sta	12	430	430	720
177	178.18		192.29	Tompkins Hill Mtr & Reg Sta to Ryan Slough Reg Sta	12	350 (12)	425	600
177	V-37.80		V-149.18	Crosstie between Lines 177 and Line 400 (within Gerber Compressor Station)	12	819	819	960
177	43.87		1.24	Red Bluff Tap to Red Bluff and Diamond Nat'l Corp.	6	819	819	960
181A	6.19		20.01	V-6.19 to V-20.01, Watsonville	10,12	303	303	400
181B	0.00		2.10	Anzar Rd. Mtr and Reg to Cole Road Reg Sta	10	500	500	500
181B	2.10		10.85	Cole Road Reg Sta to MP 10.85, Watsonville	10,16,20	400 (13)	400	500
*182	0.00		12.86	Serpa "Y" to V-12.86, Suisun Junction	8,10	510	510	800
182	12.86		18.23	V-12.86 to Shell Chemical Meter Station	12	435	435	800
*182	18.23		18.87	Shell Chemical Meter Sta to Bailey Rd. Mtr & Reg Sta	12	435	435	800
182				Kirby Hills Field Collection System	3-8	510	510	800
182				Suisun Field Collection System	2-6	510	510	800
183	0.00		6.35	Moffat Ranch Field Mtr & Reg Sta to Firebaugh Reg Sta	3	175	320	800
185	0.00		0.014	Hollister Gas Field Tie to Line 301 A	4	396	396	500
186	0.00		26.10	Red Top Reg to Dos Palos Meter Station	3,4,6	500	625	720
186	26.10		29.40	Chowchilla Field to Red Top Reg Station	2,3,4	500	960	960
*187	0.56		22.58	San Ardo Field to Jolon Road Reg Station	6	313	313	500
*187	22.58		65.70	Jolon Rd. Reg Sta to Harkins Rd. Mtr & Reg Sta	8	313	313	500
189	0.00		1.72	Humboldt Bay PP Tap to Humboldt Bay PP Primary Reg Sta	10	350 (14)	425	600

MAOP OF NUMBERED TRANSMISSION LINES

Line Number	MP	to	MP	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
190	0.00		16.08	Kettleman Compr Sta to Coalinga Nose Dehydrator Sta	12,16	2160	2160	2160
190	16.08		16.22	Coalinga Nose Dehydrator Sta to Coalinga Nose Field	16	2160	2160	2160
*191	25.30		29.36	Reliez Sta Rd. Reg Sta to The Junction	8,10,12	268	283	400
*191	29.36		32.76	The Junction to MP 32.76	10	268	270	400
*191	32.76		35.83	MP 32.76 to Martinez Meter	10	268	268	400
*191A	0.00		6.33	The Junction to Ardilia Reg Sta (MP 6.13) and Orinda Reg Sta (MP 6.33)	3,6,8	268	283	400
*191B	0.00		1.53	The Junction to Reliez Valley Rd, Lafayette	8	268	283	400
191C	0.00		3.86	Antioch Terminal to Antioch Town Meter Station	30,34	600	600	600
191C	3.86		3.87	Antioch Town Meter Station Cross Tie	16	600	600	600
191D	3.87		9.93	MP 3.87 to SP 3 Line 191 Meter Sta Via Pittsburg PP	20,24	338 (15)	390	600
191D	9.93		25.30	SP 3-Line 191 Meter Sta to Reliez Sta Rd. Reg Sta	12,16,20	338	338	600
193				Rice Creek Field Collection System	2-8	819	960	960
193				Malton Field Collection System	4,6,8	819	960	960
193				Kirkwood & Rice Creek Field, North, Collection System	6	819	819	960
194				McMullin Ranch Field Collection System	2-10	440	440	800
195				Rio Vista Field, East Side Collection System (HP)	2-16	800 (16)	800	800
*195				Rio Vista Field, East Side Collection System (LP)	2-16	510	510	800
196				King Island Gas Field Collection System	4,6	800	800	800
196	0.00		13.45	Isleton Meter Station to Las Vinas Station	8,12,16	800 (16)	800	800
197A	0.00		21.41	Las Vinas Station to Brandt Road PLS	10	300 (28)	388	720
197A	21.41		31.23	Brandt Road PLS to MP 31.23	10,12	300 (28)	720	720
197A	31.23		39.57	MP 31.23 to MP 39.57	12	300 (28)	320	720
197A	39.57		41.78	MP 39.57 to Calaveras Cement Meter Station	8	300 (28)	320	720
197B	0.00		21.48	Las Vinas Station to Brandt Road PLS	4,6,8	300 (28)	388	720
197C	17.44		23.02	Ione Tap to MP 23.02	10	300 (28)	720	720
199				Bunker Field Collection System	3-8	792	796	800
200				Rio Vista Field, West Side, Collection System (HP)	2-16	800 (17)	800	800
*200				Rio Vista Field, West Side, Collection System (LP)	2-16	510	510	800
200	0.00		6.51	Rio Vista Field, West Side, Collection System (LP), Rio Vista "Y Mixer Sta to Serpa Jct Compr Sta	12	510	800	800
200				Rio Vista Field, West Side, Collection System (30 psig)	3-10	400	510	800
200				Liberty Island Field Collection System	4	800 (17)	800	800
200				Lindsey Slough Field Collection System	3-10	868 (17)	868	960
201				Todhunters Lake Field Collection System	2-12	792	960	960
201				Greens Lake Field Collection System	2	792	960	960

MAOP OF NUMBERED TRANSMISSION LINES

Line Number	MP	to	MP	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
202	0.00		23.72	Camp Far West Mtr Sta to Grass Valley Reg Sta	6,8	480	720	720
203				Winchester Lake Field Collection System	3,4	800	800	960
206	0.00		0.67	Pleasant Creek Tap to Pleasant Creek Field Compr Sta	12	975 (18)	1440	1440
207				Conway Ranch Field Collection System	4,6,8	800	1000	960
208				Union Island Field to Lathrop Dehydrator	12	825 (19)	1000	1000
209	0.00		4.06	Johns Manville Reg Station to 5th and Garden, Willows	4	479 (20)	720	720
210				Denverton Field Collection System	3,4,6	650	650	720
210A	0.00		1.36	Rio Vista "Y" to Creed Station (V-1.36)	10	650	650	800
210A	1.36		19.47	Creed Station (V1.36) to Cordelia Reg Station	24,32,34,36	650	650	675
210A	19.47		25.62	Cordelia Reg Station to Napa "Y' Meter Station	10,12,24,32	650	650	675
210B	0.00		1.37	Rio Vista "Y' to Creed Station (V1.37)	16	800	800	800
210B	1.37		25.98	Creed Station (V1.37) to Napa "Y" Meter Station	16,18	650	650	720
210C	19.47		32.11	Cordelia Reg Sta to Herrmann Station	24	650	675	675
210C	0.00		3.70	Exxon Tap to Exxon Meter Station	18	650	720	675
212				Tremont Field Collection System	4,6	792	800	800
213				Orland Field Collection System	3,4	819	960	960
214	0.00		0.41	Arcoma-Shriners No. 16-3 Gas Well	3,4	315	600	600
215	0.00		20.05	Oak Flat Road Meter Sta to West Ave. Reg Station	12	890	890	890
220	0.00		2.41	Rio Vista 'Y" to Maine Prairie Meter and Reg Sta	16	792	800	800
220	0.00		2.41	Rio Vista "Y" to Maine Prairie Meter and Reg Sta	10	510	796	800
220	2.41		22.01	Maine Prairie Meter & Reg Sta to Davis Meter & Reg Sta	10,16	792	796	800
220	22.01		34.46	Davis Meter & Reg Sta to Dunnigan-Spreckels Reg Sta	6,8	500	500	800
220				Dixon Gas Field	4	792	796	800
300	0.00		0.47	Panoche Station to Line 2	24	890	890	890
300A	0.00		0.64	Colorado River to Topock Compressor Station	30,34	660 (21)	700	700
300A	0.64		40.87	Topock Compressor Sta to PLS 1 A	34,40	865 (22)	867	890
300A	40.87		103.72	PLS 1 A to PLS 2A	34	779 (22)	815	815
300A	103.72		130.37	PLS 2A to PLS 2AX	34	682 (22)	688	688
300A	130.37		159.33	PLS 2AX to Hinkley Compressor Station	24,26,34	573	573	573
300A	159.33		203.02	Hinkley Compressor Station to PLS 3A	34	860 (22)	861	890
300A	203.02		256.21	PLS 3A to PLS 4A	34	766 (22)	817	817
300A	256.21		299.01	PLS 4A to PLS 5A	34	754 (22)	757	757
300A	299.01		353.85	PLS5A to Kettleman Compressor Station	32,34	668 (22)	669	688
300A	353.85		436.74	Kettleman Compressor Station to PLS 6A	24,34,36	839 (22)	840	890
300A	436.74		461.07	PLS 6A to PLS 6AX	34	619 (22)	631	715
300A	461.07		490.65	PLS 6AX to PLS 7A	34	631	631	715

MAOP OF NUMBERED TRANSMISSION LINES

Line Number	MP	to	MP	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
300A	490.65		502.34	PLS 7A to Milpitas Terminal	34	555 (22)	558	676
300B	0.00		0.45	Colorado River to Topock Compressor Station	34	660	660	735
300B	0.45		40.49	Topock Compressor Station to PLS 1B	24,34,40	865 (22)	867	894
300B	40.49		103.51	PLS 1 B to PLS 2B	24,34	779 (22)	821	821
300B	103.51		130.40	PLS 2B to PLS 2BX	34	682 (22)	688	688
300B	130.40		161.02	PLS 2BX to Hinkley Compressor Station	34	573 (22)	573	573
300B	161.02		203.07	Hinkley Compressor Station to PLS 3B	24,34,40	860 (22)	861	897
300B	203.07		256.64	PLS 3B to PLS 4B	34	766 (22)	816	816
300B	256.64		299.00	PLS 4B to PLS 5B	34,36	754 (22)	757	757
300B	299.00		154.02	PLS 5B to Kettleman	34	668 (22)	669	688
300B	354.02		436.85	Kettleman Compressor Station to PLS 6B	34	839 (22)	840	890
300B	436.85		461.08	PLS 6B to PLS 6BX	34,36	619 (22)	631	715
300B	461.08		490.92	PLS 6BX to PLS 7B	34	631	631	715
300B	490.92		502.64	PLS 7B to Milpitas Terminal	34,36	597 (22)	600	669
301A	0.00		24.84	Hollister Meter Station to Moss Landing PP	20	396	396	500
301B	0.00		114.02	Dolan Road Meter Station to Hilltown Reg Station	12	408	408	408
*301C	13.87		17.20	V-13.87 to Harkins Road Meter & Reg Station	12	408	408	408
301D	0.00		1.72	Anzar Tap Station to Anzar Road Meter & Reg Station	10	500	500	500
*301E	0.00		0.89	Reservation Rd Tap to Davis-Reservation Roads Reg Sta	12	408	408	408
*301F	0.00		7.94	Espinosa Road Tap Sta to 8th St & 1st Avenue Reg Sta (Fort Ord Reg Sta)	16	408	412	412
301G	0.00		24.68	Hollister Meter Station to Moss Landing PP Primary Reg Sta	24,30	500	500	500
301H	0.00		1.72	Anzar Tap Station to Anzar Road Meter & Reg Station	16	500	500	500
302				Grimes Area Collection	2-20	975	975	975
302W	0.00		5.76	Hershey Junction to Buckeye Creek PLS	20	975	975	975
303	0.00		7.95	Antioch Terminal to Brentwood Terminal	24,36	720	720	720
303	7.95		11.97	Brentwood Terminal to Vasco Road	24,36	720 (23)	793	864
303	11.97		25.54	Vasco Road to Livermore Junction	24,36	720 (23)	864	864
303	25.54		36.56	Livermore Junction to Sheridan Rd PL Station	36	720	731	877
303	36.56		42.86	Sheridan Road PL Station to Irvington Station	36	590	590	877
304	0.00		11.29	Lathrop Dehydrator & Odorizer Sta to Tracy Sta	12	825	825	825
304				Lathrop Field Collection System	3-12	825	825	890
306	0.00		40.30	Kettleman Compressor Station to Estrella PL Station	20	840	840	840
306	40.30		70.02	Estrella PL Station to Morro Bay PP Reg Station	20	636 (26)	650	840
307	0.00		16.37	Spreckels Sugar Meter Sta to Spreckels Sugar Reg Sta	8	500	500	890
307	0.19		2.20	10" parallel line between Tap 0.91 and Tap 2.20	10	500	890	890

MAOP OF NUMBERED TRANSMISSION LINES

Line Number	MP	to	MP	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
307	12.05		16.92	Derrick Avenue Tap to Arbios Reg Station	8	500	890	890
308	0.00		0.118	Collection Line 308 to Ginochio 1	3	438	495	720
310	0.00		38.25	Tres Pinos Creek Station to BAF Cogen Facility	10,12	840	890	890
311	0.00		54.44	Trona Tap Meter Sta to Westend Primary Reg Sta	10,12	700	700	890
311	31.97		38.49	12" parallel line between Tap 31.97 and Tap 38.49	12	700	810	890
312	0.00		8.00	Paloma to Paloma Field Meter Station	8	757	757	820
313	0.00		34.40	Lucerne Valley Tap Meter Sta to Big Bear Meter Sta	8,10	573	573	573
314	0.00		24.19	Hinkley Compressor Station to Riverside PLS	12	861	861	890
314	24.19		29.12	Riverside PLS to Valve 8 at MP 29.12	10	550	550	720
*314	29.12		43.18	Valve 8 at MP 29.12 to Black Mt. Meter and Reg Station	8,10	550	550	720
*314A	0.00		0.24	Tap 24.31 to Riverside Cement Mtr & Reg Sta	8	550	550	720
*314B	0.00		0.08	Tap 27.46 to Airbase Road Meter Station	8	550	550	720
*316				Dutch Slough Area Collection System	2-12	800	800	800
316	0.00		V-13.07	Brentwood Dehydrator Sta to V 13.07 on L-114	16	497 (4)	720	720
318				Black Butte Field Collection System	3,4,6	911	911	960
319	0.00		9.01	"Gosford Intertie" Kern River Sta (PG&E) to Coles Levee Reg Sta (SoCal Gas)	34	757(27)	1440	1440
319A	0.00		2.17	Tap 3.58 to Renfro Reg Sta	4	757(27)	1440	1440
331	0.00		8.03	Bayview Road Station to Ingomar Packing (Tap 8.03)	4,6	500	890	890
331	0.00		5.31	Bayview Road Station to Morning Star, 6" Parallel	6	500	890	890
335				Putah Sink Field	3,4	800	800	800
336				Harte Field Collection System	3	412	800	800
337				Zamora Gas Field	3,4	800	800	800
*338				Kettleman City Field Collection System	2	669	669	688
339	0.00		0.87	Rancho Capay Field Collection System	4	819	819	960
341	0.00		0.01	Tulare Lake Field Collection System	6	688	688	720
342	0.00		2.18	Mt. View Gas Field at T-257.75B, Line 300	3	757	757	960
372	0.00		3.70	Ridgecrest Tap to Ridgecrest Primary Reg Station	6	700	700	960
375	0.00		6.60	L- 1 42 Tap to V-6.6 (So. Calif. Gas L-7039 Tap)	16	475	833	780
375	6.60		17.41	V-6.6 to PSE, Mt. Poso Cogeneration Plant	8,12,16	475	833	780
375A	0.00		2.05	Tap 9.20 to Destec Live Oak EOR Cogen	8	475	833	780
375B	0.00			Tap 10.38 to Destec Double "C" EOR Cogen	6	475	833	780
375C	0.00			Tap 10.91 to Destec High Sierra EOR Cogen	6	475	833	780
375D	0.00			Tap 11.39 to Destec Kern Front EOR Cogen	6	475	833	780
376	0.00		1.67	SoCal Gas L-7039 to Arco Cork Lease	6,8,10	780	780	780
377	0.00		0.58	So. Calif. Gas Co. L-7039 to Dexzel Energy Corp Mtr & Reg Sta	6	771	720	780

MAOP OF NUMBERED TRANSMISSION LINES

Line Number	MP	to	MP	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
400	0.00		24.60	California-Oregon Border to Tionesta Compressor Station	36	911	911	911
400	24.60		48.64	Tionesta Compressor Station to Indian Springs PLS	36	907(24)	911	911
400	48.64		82.33	Indian Springs PLS to Burney Compressor Station	36	887(24)	911	911
400	82.33		115.26	Burney Compressor Station to Shingletown PL Station	36	884(24)	911	911
400	115.26		149.18	Shingletown PL Station to Gerber Compressor Station	26,36	865(24)	911	911
400	149.18		197.76	Gerber Compressor Station to Delevan Compressor Station	36	907(24)	911	911
400	197.76		233.87	Delevan Compressor Station to Buckeye Creek PL Sta	36	1040	1040	1040
400	233.87		297.87	Buckeye Creek PL Station to Antioch Terminal	26,36	965(24)	975	975
401	0.00		24.88	California-Oregon Border to MP 24.88	42	911	911	911
401	30.62		48.65	MP 30.62 to Indian Springs PLS	36,42	911	911	911
401	48.65		82.34	Indian Springs PLS to Burney Compressor Station	42	884(24)	911	911
401	82.34		97.94	Burney Compressor Station to MP 97.94	42	884(24)	911	911
401	106.30		115.28	MP 106.30 to Shingletown PLS	42	911	915	911
401	115.28		149.19	Shingletown PLS to Gerber Compressor Station	42	865(24)	911	911
401	149.19		197.72	Gerber Compressor Station to Delevan Compressor Station	36,43	907(24)	911	911
401	197.72		233.89	Delevan Compressor Station to Buckeye Creek PLS	42	1040	1040	1040
401	233.89		317.23	Buckeye Creek PLS to Bethany Compressor Station	42	965(24)	975	975
401	317.23		427.34	Bethany Compressor Station to Panoche Meter Station	42	1040	1040	1040
402	0.00		38.10	Redding-Calaveras Tap Sta to Calaveras Cement Co.	8,10,12	600	600	720
403	0.00		1.38	Rio Vista "Y" to Creed Station	16	800 (25)	800	800
404	0.00		1.64	Tap 85.51 on L-400 to Burney Forest Products	2,4	911	911	911

Notes:

A. Asterisks (*) indicate that line or sections are under 20% SMYS, but are listed for the purpose of continuity.

B. Numbered Notes

(1) The MOP of this section of L-101 and L-109 is restricted to 145 psig since they are connected to L-132 at a common header at SF Gas Load Center.

(2) This section of L-108 has a 175 psig MOP when operated in conjunction with the Pacific Paperboard Feeder.

(3) This section of L-114 has a 510 psig MOP when Block Valve 8.31 is open.

(4) This section of L-114 has a 438 psig MOP when run in conjunction with the Antioch header.

(5) This section of L-114 has a 497 psig MOP when run in conjunction of Line 114 north of Brentwood Terminal.

(6) This section of L-120 is directly tied to Sutter Buttes Field Collection System which has a MOP of 485 psig.

MAOP OF NUMBERED TRANSMISSION LINES

Line Number	MP	to	MP	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
(7) The MOP is 720 psig when this section of L-131 is operated in conjunction with the HP Rio Vista Collection System.								
(8) The MOP of Lines 100, 101, & 132 is reduced because these lines are connected directly to Line 109 (375 psig) at Milpitas Terminal.								
(9) The MOP of L-132B is limited due to the MAOP of L-132 between Martin Reg Sta and SF Gas Load Center. However, when operated as a backfeed to L-101 through the crosstie at L-101, the MOP is 275 psig.								
(10) This section of L-138/L-138A has a 700 psig MOP when operating in conjunction with 20" L-138B.								
(11) The MOP of Line 168 shall be 720 psig when operated in conjunction with L-131.								
(12) The MOP of this section of L-177 is limited due to the MAOP of the 8" L-137 between Ryan Slough Reg Sta & Arcata Reg Sta.								
(13) This section of L-181B has a 303 psig MOP when operating in conjunction with L-181A.								
(14) The MOP of this section of L-189 is limited due to the MAOP of L-126 between Tompkins Hill Mtr & Reg & Union St Reg Stations.								
(15) The MOP of this section of line is 390 psig when V9.93 at SP3-L-191 Mtr Sta is CLOSED.								
(16) The MOP of this section of L-196&196 is 720 psig when it is operated in conjunction with L-131.								
(17) The MOP of this section of L-200 is 720 psig when it is operated in conjunction with L-131.								
(18) The MOP of this section of L-206 is limited due to the MAOP of L-400 at MP258.34.								
(19) The MOP of this section of L-208 is limited due to the MAOP of L-304 at Lathrop Dehyd & Reg Sta.								
(20) The MOP of this section of L-209 is limited due to the MAOP of L-128.								
(21) When this section of L-300A is tied directly to L-300B, the MOP is limited to 660 psig.								
(22) Maximum operating pressures shown for segments of L-300 A & B are due to elevation differences. The MOP listed is for MOP at the facilities supplying the various line segments.								
(23) The MOP of this section of line is 720 psig if V-7.95 (Brentwood Terminal) is opened. Furthermore, Division regulation, crosstied to both L-114 and L-303, has an MAOP of 600 psig. If it becomes necessary to feed regulation from L-303, the MAOP of L-303 becomes 600 psig.								
(24) Maximum operating pressures shown for segments of L-400 401 are due to elevation differences. The MOP listed is for MOP at the facilities supplying the various line segments.								
(25) The MOP of this section of line is restricted to 650 psig when operating in conjunction with 10" L-210A.								
(26) The MOP listed is the MOP at Estrella PLS. The reduced MOP is to compensate for the hydrulic head effect cause by elevation drop in the pipeline.								
(27) The MOP of Line 319 is 757 psig when operating in conjunction with Line 300A at Kern River Station.								
(28) The MOP of Line 197A/B/C is limited due to the MAOP of Turner Road Feeder.								

MAOP OF DFMS OPERATING AT OR OVER 20% SMYS

	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
Area 1 (Peninsula)					
	Half Moon Bay Feeder Line	8,10,12	375	400	400
	Sanchez Feeder	6,8	375	400	400
	Harbor Blvd. Feeder	8	375	400	400
	Stanford Cogeneration Feeder	10	375	400	400
	Hayward Avenue Feeder	8,10,24	375	400	400
	Marsh Road Feeder	3,8	375	400	400
Area 1 (San Francisco)					
	Hunters Point PP Feeder	20	145	145	275
Area 2 (Diablo)					
	Foster-Wheeler Feeder	8,12	338	338	600
	Tosco Oil Company Feeder	12	338	338	600
	Nichols Road Tap	4	338	338	600
	Pittsburg Town Feeder	12	338	338	600
	Concord Feeder to Alpha Beta Regulator	8	338	600	600
	Concord Feeder	6,8,10,12	170	170	600
	Antioch Feeder	6	338	600	600
	Danville Feeder	6,8,10	338	365	600
	Discovery Bay Feeder from L-57A to Secondary Stage Regulator (Bixler Road)	3,4	722	867	867
	Discovery Bay Feeder from Bixler Road Reg to Pt. of Timber Regulator	4,6,8	400	400	400
	Viera Avenue Feeder	8	338	338	600
Area 2 (East Bay)					
	Port Costa Feeder	4,6	315	338	600
	Standard Oil Feeder	22	400	400	400
	Union Oil Tap	12	400	400	400
	50th Avenue Holder Feeder off Line 105	16, 20	150	198	275

MAOP OF DFMS OPERATING AT OR OVER 20% SMYS

	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
Area 2 (Mission)					
	Pacific States Steel Feeder	8,12	411	411	500
	San Ramon Valley Feeder	12	500	656	650
	Santa Rita Feeder	6,12,16	500	656	650
	Warm Springs Feeder	4	590	650	650
Area 3 (Salinas)					
	Santa Cruz to Davenport	10,12	300	303	400
	Watsonville to Santa Cruz	8-20	300	303	400
	Watsonville to Rob Roy Junction	10,16	400	400	400
	Airport Boulevard Feeder	6	400	400	400
	*Monterey #1-MP 1.59 to Fig-Frank Streets Reg Sta	8,12	313	313	408
	*Monterey #2-Ford Ord to Fig-Frank Streets Reg Station	8,10,12,16	313	313	408
	*DFM-4 Monterey V-18.65 to Carmel V-2.13 (Aguajito Rd Regulator Station)	8,10	313	313	408
	DFM-6 Espinosa Rd Main from 301-B, V-3.40	6	408	500	408
	*DFM-7 Union Carbide Main from 187, MP 17.42	3	313	313	500
	DFM-8 Paradise Road to Meridian Road Main	4,6	500	500	500
Area 3 (San Jose)					
	Milpitas Terminal to PLS #7, King Road Feeder	16,20,24,30	200	200	400
	Pacheco Pass Rd, Bloomfield to Hwy 101 Feeder	6,8,10,16	400	400	400
Area 4 (Kern)					
	DFM-8, L-300 A & B to US Borax & Chemical Co. Sec Reg & Mtr Sta	4,6,8	861	897	897
	DFM-8 US Borax & Chemical Co. Sec Reg & Mtr Sta to US Borax & Chemical Co.	4,6,8	490	490	720
	Segs III-VII Feeder, Kramer Junction	6	861	897	897

MAOP OF DFMS OPERATING AT OR OVER 20% SMYS

	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
Area 5 (Fresno)					
	San Joaquin to Tranquility	3	650	800	900
	Ashland Avenue Tap to River Rock Products	4,6	400	593	720
	SIM CAL Chemical Co. Feeder	6	650	650	720
	Adams & Elm Meter & Reg Sta to So. Calif. Gas Co.	8	263	263	400
	Coalinga Feeder-Amador Station to Oil City Road Station	10	498	890	890
	Coalinga Feeder-Oil City Road Sta to 25-D	8,10	498	720	720
	Clovis Feeder Main	6,12	650	650	720
	Peach and Central Feeder	6,8	650	720	720
	Kerman Primary Feeder	4	500	500	720
Area 5 (Modesto)					
	Ripon-Modesto Feeder, Stanislaus River to Modesto	8,12,16	408	408	720
	Dale Road to North Avenue Feeder	4,6,8,12	408	408	720
	Riverbank Feeder	8,10	408	408	720
	Carpenter Road Feeder (Modesto)	4,12	408	720	720
	Pauline Avenue Feeder	4,6	408	408	720
	Turlock Irrigation District Peaking Power Plant	6	500	890	890
	Claus Road Feeder	6,8	408	720	720
Area 5 (Merced)					
	DFM-4 Cressey Way Tap to Rogers Bros Packing	4,6	400	400	720
	DFM-10 Red Top Cogeneration Facility Service Line	4	500	625	720
	DFM-29 L-118 Tap to Madera Women's Prison	4	400	400	720
	DFM-30 L-307 Tap to Mendota Biomass Cogeneration Plant	4	500	890	890
	DFM-32 L-134 Tap to Kerman Primary Reg Station	4	500	720	720
	Yosemite Avenue Feeder	6	400	400	720
	Snelling Highway Feeder	6,8	400	400	720
	Vinewood Avenue Feeder	4	400	720	720
	Winton Avenue Feeder	6	400	720	720
	Mendota Biomass Feeder	4	890	890	890
	DFM-36 Bellevue Ave DFM to JR Wood Cogen	4	400	720	720
	DFM-35 Ragu Foods DFM	8	400	400	400

MAOP OF DFMS OPERATING AT OR OVER 20% SMYS

	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
Area 5 (Stockton)					
	Carpenter Road Feeder	6,8	412	720	720
	Eight Mile Road Feeder	6,8	412	412	720
	Turner Road Feeder A	8	300	720	720
	Turner Road Feeder B	4,6	300	300	720
	McArthur Road Feeder	8	295	720	720
	Louise Avenue Feeder	8,10	408	408	720
	Ripon-Modesto Feeder, L-108 to Stanislaus River	8,12,16	408	408	720
	Ripon-Modesto Feeder, L-108 to Stanislaus River	12,16	408	720	720
	East Stockton Feeder (Miner Avenue)	6,8	412	412	720
	French Camp Feeder	6	412	412	720
	Pinchot Feeder (Ragu Foods)	6,8	412	412	720
	Yosemite Avenue Feeder (Airport to Pacific)	8	408	408	720
	Arch Airport Feeder	6	412	720	720
	Swain Road Feeder	6,8,10	175	175	720
	Hammertown Feeder	8,10	412	720	720
Area 6 (North Valley)					
	DFM-1 Butte College Tap	3,4	400	720	720
	Orland Tap f rom L-177 to Second Stage Regulator	6	490	490	720
	Paradise Primary Reg to Secondary Reg	8	400	720	720
	Hamilton City Tap to Verschagin	4,6	720	720	720
	Holly Sugar Tap	4,6	575	720	720
	Airport Road DFM	6	500	720	720
	Simpson Paper Mill Feeder	6	500	600	720
	Enterprise Town Feeder	4,6	500	600	
	Calaveras Cement Company Feeder	8	500	600	720
(1)	Red Bluff District Tap	2	911	911	911
	Burney Tap	2	911	911	911
	Sierra Pacific Lumber (Burney) Tap	2	911	911	911
	Redding Feeder	6	500	600	720
	Clear Creek Road Feeder	4	500	720	720

MAOP OF DFMS OPERATING AT OR OVER 20% SMYS

	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
	Louisiana Pacific Lumber Mill s/o Red Bluff	2	911	911	911
	McArthur-Fall River Feeder	2	525	911	911
	Gerber Feeder	2	450	911	911
Area 6 (Sacramento)					
	Line 108 to Campbell Soup Company	16	412	412	720
	Line 108 to Galt Primary Regulator	4	490	490	720
	*DFM-1 Sacramento Division Gas Load Ctr to North Sacramento Holder	8,12	260	260	275
	Line 108 Tap to Sacramento Blvd Regulator	10,12,16	412	412	720
	Line 108 to Florin Road Primary	6,10	412	412	720
	DFM-2 Union Carbide Tap to Union Carbide Corp.	8,10	412	412	720
	Line 108 to Florin Road and Woodbine Avenue	6	412	412	720
	Sutterville Road to 43rd and Riverside	6,8	412	412	720
	119-Elm and Traction Ave Reg Station to T-0.93	12	180	500	600
	16" DFM-Madison and Kenneth to Pershing and Madison	16	274	500	500
	16" DFM Hwy 80 to Hemlock	16	274	275	500
Area 6 (Sierra)					
	Yuba City Underground Holder to Market St Reg Pit	6,8	250	250	400
	Green Leaf I Cogen Plant	6	975	975	1000
	Green Leaf II Cogen Plant	6	975	975	1000
	Feather River Boulevard	4	600	600	720
	Nicolaus Road, Lincoln	4	100	600	600
	Diamond Oaks Feeder	6	500	500	600
	District 10 DFM, Marysville	8	400	400	720
	Yuba City Cogen Plant	3,6,8	600	720	720
Area 6 (Colusa)					
	DFM-1 Tap to Strain Ranch Dryer	4	800	800	800
	Naas Foods Feeder, Williams	4	800	800	800
	Colusa Feeder Main	4,6	240	240	800
	Williams Feeder Main	3	180	180	180
	Maxwell Feeder Main	2	600	600	1000

MAOP OF DFMS OPERATING AT OR OVER 20% SMYS

	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
Area 6 (Vacaville)					
	American Home Foods Feeder	2,4,6	720	720	720
	Anheuser Busch Feeder	4	650	650	720
	Dixon Canning Company Feeder	4	720	720	800
	Vacaville Feeder	6	400	400	400
	6" & 10" Fairfield Feeder	6,10	650	650	720
	10" Fairfield Feeder-Scandia Road-Vaca Tap	10	675	675	675
	12" Fairfield Feeder-Scandia Road-Vaca Tap	12	650	650	740
	Robben Road Feeder-Tremont Tap to Dixon Meter Station	6	720	750	800
	Travis to Vacaville Junction	3,4,6	400	400	400
	6" Vacaville Feeder-Scandia to SNRR	6	400	400	400
	Vacaville Feeder-SNRR to n/o Alamo	6	400	400	720
	3" Vacaville Feeder-Scandia to SNRR	3	400	400	400
	Vacaville Feeder-SNRR to Elmira Road	3,6	400	400	720
	Vacaville Feeder-Eldridge to Nut Tree Road	4,6	400	400	720
	Davis St. Feeder-Mason to McNigh	4	400	720	720
	Elmira Rd. Feeder-Peabody to Shasta	6	400	400	720
	Hawkins Road Feeder-Lewis Road to L-400	6	975	975	975
	Hawkins Road, Nut Tree Road to Lewis Road	8	400	400	720
Area 6 (Woodland)					
	Gibson Feeder Main	8	800	800	800
	Gibson Feeder Main	6	500	500	800
	Fairfield-Knolls Feeder	4	500	500	800
	Hunts Feeder Main	6	500	500	800
	Woodland Biomass Feeder	4	500	500	500

MAOP OF DFMS OPERATING AT OR OVER 20% SMYS

	Description	Pipe Diameter (inches)	MOP (psig)	Min. MAOP for Segment (psig)	Future Design Pressure (psig)
Area 7 (North Bay)					
	26" Line 21 (V-16.16) to Pine St Meter Station, V-3.04	8	450	500	675
	26" Line 21 (V-16.16) to Kilburn Reg Station	10	450	500	675
	Kilburn Reg Station to T-14.01, north of Yountville	8,10	450	500	675
	T-14.01 to Inglewood Lane MP 18.96	10	150	500	675
	Tap to Kaiser Steel east of h apa River	4	450	500	675
Area 7 (North Coast)					
	Cotati Feeder	8	450	500	675
	Sonoma Tap Line	6	450	500	675

Notes:

A. Asterisks (*) indicate that line or sections are under 20% SMYS, but are listed for the purpose of continuity.

B. Numbered Notes

(1) Formerly Line 309.

MAOP OF PIPE TYPE HPUGH OPERATING AT OR OVER 20% SMYS

Description	Pipe Length (feet)	Pipe Diameter (inches)	MOP (psig)	MAOP (psig)	Design Pressure (psig)	Future Design Pressure (psig)
Santa Cruz	7,360	30	618	618	618	618
	4,950	34	618	618	618	618
Yuba City	24,339	34	525	525	550	550
Sacramento	79,520	34	500	500	500	500
	3,984	36	500	500	500	500
	10,956	42	500	500	500	500