

Pacific Gas and Electric Company

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William R. Mazotti  
Vice President  
Gas and Electric Technical Services

November 12, 1990



[REDACTED]  
Utilities Safety Branch  
Safety Division  
Public Utilities Commission  
of the State of California  
505 Van Ness Avenue, Room 2005  
San Francisco, CA 94102

|            |                  |        |     |      |      |     |
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Subject: Standard Practice 463-8  
Maximum Operating Pressure of Pipelines  
and Mains Operating at or Over 20% SMYS  
and Drawing No. 086868, Pipeline Data Sheet

Dear Mr. [REDACTED]

The enclosed Standard Practice 463-8, with an effective date of September 17, 1990, supersedes the Standard Practice issued on April 15, 1983. The new standard practice has been completely rewritten to reflect new departments and their responsibilities within PG&E. Other changes were made, as well, to clarify the procedural requirements of the standard practice.

Also enclosed is the updated revision (Revision 8) of Drawing 086868 "MAOP of Lines Operating at or Over 20% SMYS," dated September 17, 1990. Drawing No. 086868 provides information on PG&E gas facilities operating at or over 20% of SMYS. This drawing has been revised to reflect new construction and changes in MAOP, which occurred since the last revision. The commission has already been informed of those changes where notification was required by Sections 141.2 and 141.3 of General Order 112-D. Copies of the revised drawing have been distributed for inclusion in PG&E's Gas Estimators' Manual.

If you have any questions concerning either the Standard Practice or the drawing, please contact [REDACTED] or [REDACTED] at [REDACTED]

Sincerely yours,

ORIGINAL SIGNED BY  
WILLIAM R. MAZOTTI

[REDACTED]

bcc: [REDACTED]  
Leslie Everett  
[REDACTED]

Enclosure



Issuing Department GAS SYSTEM DESIGN Page No. 1 (of) 3 Effective 9/17/90  
Corporate Officer VICE PRESIDENT Replacing Revised pages 1 & 2, added page 3  
GAS & ELECTRIC TECHNICAL SERVICES Page No. \_\_\_\_\_ (of) \_\_\_\_\_ Effective \_\_\_\_\_

Subject: MAXIMUM OPERATING PRESSURES OF PIPELINES AND MAINS OPERATING AT OR OVER 20% OF SMYS

PURPOSE AND POLICY

1. To establish a uniform procedure for identifying, reviewing and revising Design Pressure (DP), Future Design Pressure (FDP), 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.

RECISSIONS

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

RESPONSIBILITY

3. Division Gas & Electric Operations Managers, Region Transmission Managers, Gas Production and Storage Manager, and the Northern and Southern Pipeline Operations Managers shall be responsible for the performance required by this Standard Practice for the pipeline facilities in their respective areas of responsibility. Performance will include establishing, revising, and confirming the MOP, MAOP, FDP, and DP for the pipeline facilities, and for updating the records required by the referenced Standard Practices, whenever an MOP, MAOP, FDP, or DP is revised.

REFERENCES

4. a. Current edition of California Public Utilities G.O. 112-D
- b. Drawing 086868 "Pipeline - Data Sheet, MAOP of Lines Operating At or Over 20% SMYS"
- c. S.P. S-463-8 "Maximum Operating Pressures of Pipelines and Mains Operating At or Over 20% of SMYS"

\*Paragraph Revised (Portions Underlined)  
\*\*Paragraph Added



Standard Practice No. 463-8

Issuing Department GAS SYSTEM DESIGN Page No. 2 (of) 3 Effective 9/17/90  
Corporate Officer VICE PRESIDENT Replacing  
GAS & ELECTRIC TECHNICAL SERVICES Page No. \_\_\_\_\_ (of) \_\_\_\_\_ Effective \_\_\_\_\_

Subject: MAXIMUM OPERATING PRESSURES OF PIPELINES AND MAINS  
OPERATING AT OR OVER 20% OF SMYS

DEFINITIONS

- 5. System is that portion of a pipeline which, as a unit, is protected by overpressure protective devices (e.g., regulator and monitor), complying with the requirements of G.O. 112-D, in a manner that will prevent the lowest maximum allowable operating pressure of any component of the system from being exceeded.
- 6. 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 the current edition of G.O. 112-D based on pressure tests, operating and maintenance history, and design.
- 7. Maximum Operating Pressure (MOP) is the maximum pressure at which a gas pipeline system may be operated, as specified by the responsible line organization. The MOP of a gas system may not be higher than the lowest MAOP of any of the pipeline segments or components within the system.
- 8. Design Pressure (DP) is the maximum pressure for which the weakest element in the pipeline segment could be qualified for the material and class location under the design sections of G.O. 112-D.
- 9. Future Design Pressure (FDP) is the pressure of a system to which future additions or changes to the existing facilities are to be designed and tested.
- 10. 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 the current edition of G.O. 112-D.

APPLICATION

- 11. Procedural details appear in Supplement 1 to this Standard Practice.

RECORD

- 12. 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, Region Transmission Department, Pipe Line Operations Departments or the Gas Production and Storage Department assigned with the responsibility of maintenance and operation of facility.

\*Paragraph Revised (Portions Underlined)  
\*\*Paragraph Added



Standard Practice No. 463-8

Issuing Department GAS SYSTEM DESIGN Page No. 3 (of) 3 Effective 9/17/90  
Corporate Officer VICE PRESIDENT Replacing  
GAS & ELECTRIC TECHNICAL SERVICES Page No. \_\_\_\_\_ (of) \_\_\_\_\_ Effective \_\_\_\_\_

Subject: MAXIMUM OPERATING PRESSURES OF PIPELINES AND MAINS  
OPERATING AT OR OVER 20% OF SMYS

SUPPLEMENT

13. Supplement 1, Procedural Details.

AUTHORIZED BY:

WILLIAM R. MAZOTTI  
Vice President  
Gas and Electric Technical Services

DISTRIBUTION: Division Gas & Electric Operations Managers  
Region Transmission Managers  
Northern Pipeline Operations Manager  
Southern Pipeline Operations Manager  
Gas Production & Storage Manager  
Division Admin. Analyst or Equal  
Director, Procedures Analysis  
Gas Construction Manager  
Gas Transmission and Storage Vice President

For further information about this Standard Practice, contact Gas System Design, company extension 223-3258

\*Paragraph Revised (Portions Underlined)  
\*\*Paragraph Added

SUPPLEMENT 1

PROCEDURAL DETAILS

14. Where the MAOP is less than the FDP, 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-D. For this reason, all new additions to an existing system, where the additions are expected to remain in service after the system is uprated, shall have a design pressure at least equal to the future 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.
15. 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.
16. G.O. 112-D (Subpart C of Part I) requires the Company to notify the CPUC 30 days prior to increasing the MAOP, or within 30 days after decreasing the MAOP, of any system operating, or to be operated, at 20 percent or more of SMYS. All such changes shall be reported to the Manager, Gas System Design as required by Gas Standard A-34.1.
17. The MOP (PG&E), MAOP, FDP 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 Manager of the line organization responsible for the pipeline or main to the Manager of Gas System Design Department, for each facility within the scope of this Standard Practice.
18. The Manager of Gas System Design Department will issue and distribute an updated copy of Drawing 086868 annually.

**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.

**MAOP INDEX**

|                      |   |
|----------------------|---|
| Sheets 2 through 18  | Transmission Lines Operating at or Over 20% SMYS                          |
| Sheets 19 through 26 | Distribution Mains Operating at or Over 20% SMYS                          |
| Sheet 27             | Pipe Type High Pressure Underground Holders Operating at or Over 20% SMYS |

|   |      |         |                               |   |     |       |       |       |
|---|------|---------|-------------------------------|---|-----|-------|-------|-------|
| APPROVED BY   | 8    | 9/17/90 | Updated                       |   |     | DP    |       | SHP   |
|   | 7    | 3/06/87 | Updated                       | DAW   |     | PAI   |       | CJT   |
|   | 6    | 4/10/86 | Updated                       | DAW   |     |       |       | CJT   |
|   |      |         | NEM's and Underground Holders |   |     |       |       |       |
|   |      |         | Listed by Region and Division |   |     |       |       |       |
|   | REV. | DATE    | DESCRIPTION                   | GM  | DWL | CHKD. | SUPV. | APVD. |
| <b>PIPELINE - DATA SHEET</b><br><b>MAOP OF LINES OPERATING AT OR OVER 20% SMYS</b><br><b>TYPICAL</b><br><b>PACIFIC GAS AND ELECTRIC COMPANY</b><br><b>SAN FRANCISCO, CALIFORNIA</b> |      |         |                               | DWN<br>DWN LIST<br>DWN<br>DWN BY<br>DWN FOR 20%<br>DWN NUMBER |     |       |       |       |
| ISSUE   | NO.  |         |                               | 086868  |     |       | 8     |       |
| 4-9-79  |      |         |                               |   |     |       |       |       |

LINES OPERATING AT OR OVER 20% SMYS

| Trans. Line No. | MP     | to MP  | Description  | Nominal Pipe Diameter (Inches) | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|--------|--------|--|--------------------------------|------------|---------------------------------|-------------------------------|-----------------------------|
| <u>2</u>        | 39.81  | 129.10 | Panoche Station to Vernalis Tap  | 22", 26", 36"                  | 500        | 500                             | 500                           | 890                         |
| <u>2</u>        | 129.10 | 142.50 | Vernalis Tap to Tracy Station  | 26"                            | 500        | 500                             | 890(1)                        | 890                         |
| <u>2</u>        | 142.50 | 158.00 | Tracy Station to Brentwood Terminal                                    | 26"                            | 605        | 605                             | 890(2)                        | 890                         |
| <u>3</u>        | 158.00 | 164.35 | Brentwood Terminal to Empire Mine Road                                 | 22", 26"                       | 315        | 360                             | 456                           | 600                         |
| <u>3</u>        | 167.29 | 168.00 | Delta Fair Junction to MP 168.0  | 20", 26"                       | 600        | 600                             | 600                           | 600                         |
| <u>3</u>        | 0.00   | 2.12   | Crockett Branch  | 20", 22"                       | 250        | 250                             | 250                           | 600                         |
| <u>21</u>       | 0.00   | 1.07   | Crockett Station to MP 1.07  | 24", 26"                       | 400        | 405                             | 650                           | 675                         |
| <u>21</u>       | 1.07   | 1.52   | MP 1.07 to Herrmann Station  | 24"                            | 400        | 675                             | 675                           | 675                         |
| <u>21</u>       | 1.52   | 1.59   | Herrmann Station to MP 1.59  | 12", 16"                       | 250        | 258                             | 575                           | 585                         |
| <u>21</u>       | 1.59   | 2.71   | MP 1.59 to Vallejo Station   | 12"                            | 375        | 375                             | 585                           | 585                         |
| <u>21</u>       | 2.71   | 12.05  | Vallejo Station to Napa "Y"  | 12"                            | 250        | 375                             | 585                           | 585                         |
| <u>21</u>       | 12.05  | 35.05  | Napa "Y" to MP 35.05   | 12", 24", 26"                  | 450        | 450                             | 675                           | 675                         |
| <u>21</u>       | 35.05  | 51.41  | MP 35.05 to Monroe Reg. Station  | 12"                            | 450        | 500                             | 675                           | 675                         |
| <u>21</u>       | 51.41  | 53.12  | Monroe Reg. Station to Santa Rosa Compressor Station                   | 12"                            | 450        | 494                             | 675                           | 675                         |
| <u>21</u>       | 53.12  | 137.38 | Santa Rosa Compressor Station to Willits                               | 8", 12"                        | 820        | 820                             | 890                           | 890                         |
| <u>21</u>       | 0.00   | 18.64  | Napa "Y" to Adobe  | 16"                            | 450        | 500                             | 675                           | 675                         |
| <u>21</u>       | 18.64  | 32.0   | Adobe to Laguna de Santa Rosa  | 16"                            | 450        | 500                             | 675                           | 675                         |
| <u>21</u>       | 35.90  | 37.04  | Stony Point Rd., Hearn to Sebastopol Rds.                              | 16"                            | 450        | 675                             | 675                           | 675                         |
| <u>21</u>       | 34.84  | 35.86  | McDowell Road Tap to Petaluma Reg. Station                             | 12"                            | 450        | 500                             | 593                           | 675                         |
| <u>21</u>       | 0.00   | 21.11  | Adobe to San Rafael Underground Holder                                 | 16", 20"                       | 450        | 500                             | 500                           | 500                         |
| <u>21</u>       | 0.00   | 21.11  | Adobe to San Rafael Underground Holder                                 | 12", 16"                       | 450        | 500                             | 500                           | 500                         |
| <u>*50</u>      | 0.00   | 2.87   | Marysville Service Center Reg. Station to Yuba City Underground Holder | 8"                             | 400        | 400                             | 720                           | 720                         |
| <u>*50</u>      | 2.87   | 21.62  | Yuba City Underground Holder to Biggs Reg. Station                     | 8"                             | 250        | 250                             | 720                           | 720                         |
| <u>*50</u>      | 21.62  | 26.94  | Biggs Regulator Station to Richvale "Y"                                | 6", 8"                         | 250        | 250                             | 720                           | 720                         |

**General Notes:**

- a. \*Indicates that line or sections are under 20% SMYS, but are listed for the purpose of continuity.
- b. Transmission line numbers or distribution main location descriptions which are underlined indicate changes by this revision of Standard Practice 463.8.
- c. Numbered notes, when shown on the bottom of a sheet, annotate the status of an item listed above.
  - (1) At MP 132.42, a 145' section crossing the California Aqueduct has a design pressure of 605 psig.
  - (2) At MP 149, a 950' pipeline section at the California Aqueduct crossing has a design pressure of 605 psig.

P O A E CO.  
 DRAWING NUMBER  
 086868  
 REV.  
 8

LINES OPERATING AT OR OVER 20% SWWS

SHEET 3 OF 27 SHEETS

P. O. R. CO.

DRAWING NUMBER

8

| Trans. Line No. | MP    | to MP  | Description   | Nominal Pipe Diameter (Inches) | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|-------|--------|---|--------------------------------|------------|---------------------------------|-------------------------------|-----------------------------|
| *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   | 10"                            | 400        | 720                             | 720                           | 720                         |
| 56              |       |        | Pleasant Creek Field Underground Storage System   | 8"                             | 400        | 720                             | 720                           | 720                         |
| 56              |       |        | Pleasant Creek Field Underground Storage System   | 4"                             | 1 300      | 1300                            | 1300                          | 1440                        |
| 57              |       |        | McDonald Island Field Underground Storage System  | 4", 8"                         | 1 300      | 1440                            | 1440                          | 1440                        |
| 57A             | 0.00  | 7.47   | McDonald Island Compressor Station to Palm Tract PLS  | 4" - 12"                       | 2 160      | 2160                            | 2160                          | 2160                        |
| 57A             | 7.47  | 16.64  | Palm Tract PLS to Brentwood Terminal  | 14", 16", 18"                  | 1 025      | 1025                            | 1025                          | 1025                        |
| 57B             | 0.00  | 16.46  | Brentwood Terminal to McDonald Island Field Underground Storage System                              | 18"                            | 867        | 867                             | 867                           | 867                         |
| 65              |       |        | SP 3 (T176.70) to Los Medanos Compressor Station  | 22"                            | 2 160      | 2160                            | 2160                          | 2160                        |
| 65              |       |        | Los Medanos Field Storage System  | 12", 20", 22"                  |            | 720                             | 720                           | 720                         |
| 100             | 134.5 | 150.13 | MP 134.5 to Milpitas Terminal   | 4", 22"                        | 1 800      | 1800                            | 1800                          | 1800                        |
| 101             | 0.00  | 9.80   | Milpitas Terminal to Rengstorff Avenue Station  | 20"                            | 400        | 400                             | 546                           | 400                         |
| *101            | 9.78  | 33.68  | Rengstorff Ave Sta Via Bayshore to San Francisco Division Border Meter Sta                          | 24", 34", 36"                  | 375        | 400                             | 400                           | 400                         |
| *101            | 33.68 | 44.56  | San Francisco Division Border Meter Sta Via Bayshore Blvd to San Francisco Division Gas Load Center | 20", 24", 30"                  | 400        | 400                             | 400                           | 400                         |
| *103            | 0.00  | 23.55  | Hollister Meter Station Reg Station to California Street Reg Station                                | 34", 36"                       | 109        | 110                             | 275                           | 275                         |
| *103            | 23.55 | 26.63  | California Street Regulator Station to Harkins Road Meter and Mixer Station                         | 20"                            | 350        | 350                             | 500                           | 500                         |
| 105N            | 6.88  | 23.03  | Irvington Station to San Lorenzo Regulator Station  | 12"                            | 313        | 313                             | 500                           | 500                         |
| *105N           | 23.03 | 36.48  | San Lorenzo Regulator Station to East Bay Gas Load Center   | 20", 24", 26", 34"             | 250        | 250                             | 500                           | 500                         |
|                 |       |        |   | 24", 26", 30", 34"             | 150        | 198                             | 275                           | 275                         |



LINES OPERATING AT OR OVER 20% SMS

| Trans. Line No. | MP    | to MP | Description   | Nominal Pipe Diameter (Inches) | MOP (psig)         | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|-------|-------|---|--------------------------------|--------------------|---------------------------------|-------------------------------|-----------------------------|
| *105A           | 36.64 | 37.33 | 2nd and Market to 5th and Kirkham   | 20", 24"                       | 150                | 198                             | 275                           | 275                         |
| *105A           | 38.17 | 52.01 | Poplar n/o 18th to San Pablo Station  | 20", 22"<br>24", 30"           | 150                | 198                             | 275                           | 275                         |
| *105A           | 0.00  | 2.03  | 2nd and Market to 32nd and (1)<br>Peralta                                     | 20", 22"<br>24"                | 150                | 198                             | 275                           | 275                         |
| 105N            | 0.00  | 0.18  | Baine Avenue Crossover to Line 153  | 20"                            | 250                | 250                             | 590                           | 500                         |
| *105N           | 0.00  | 1.29  | West Winton Avenue Crossover to<br>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                | 477                             | 500                           | 720                         |
| 107S            | 31.22 | 33.20 | Irvington Station to MP 33.20   | 22", 24"                       | 477                | 477                             | 500                           | 720                         |
| 107S            | 33.20 | 38.12 | MP 33.20 to Milpitas Station  | 36"                            | 477                | 720                             | 720                           | 720                         |
| 108             | 0.00  | 4.59  | Line 2 to Vernalis Field Mixing Station                                       | 16"                            | 500                | 500                             | 720                           | 890                         |
| 108             | 4.59  | 8.79  | Vernalis Field Mixing Station to McMullin<br>Ranch Mixer Station              | 16"                            | 408                | 408                             | 720                           | 720                         |
| 108             | 8.79  | 43.5  | McMullin Ranch Mixer Station to Las Vinas<br>Station                          | 16", 24"                       | 408                | 408                             | 720                           | 720                         |
| 108             | 30.85 | 32.17 | West Lane - Swain Rd. to Calaveras Rd.  | 12", 24"                       | 412                | 412                             | 720                           | 720                         |
| 108             | 43.5  | 62.20 | Las Vinas Station to Clarksburg PLS   | 16"                            | 490                | 490                             | 500                           | 720                         |
| 108             | 62.20 | 75.10 | Clarksburg PLS to Sacramento Division<br>Gas Load Center                      | 16", 20",<br>24"               | 412                | 412                             | 500                           | 720                         |
| *108            | 27.10 | 1.71  | E. Hazleton & "B" Streets Reg Station to<br>Stockton Division Gas Load Center | 12"                            | 188 <sup>(2)</sup> | 188                             | 275                           | 400                         |
| 109             | 0.00  | 43.47 | Milpitas Terminal to Sullivan Avenue<br>Reg Station                           | 22", 24",<br>30", 34"          | 375                | 375                             | 400                           | 400                         |
| *109            | 43.47 | 52.71 | Sullivan Avenue Regulator to San Francisco<br>Division Gas Load Center        | 26"                            | 150                | 150                             | 275                           | 275                         |
| 111             | 0.00  | 21.65 | Helw Junction to Fresno Junction  | 12", 16"                       | 650                | 650                             | 800                           | 720                         |
| 111             | 21.65 | 28.05 | Fresno Junction to San Joaquin Division<br>Gas Load Center                    | 8"                             | 400                | 400                             | 720                           | 720                         |
| 111             |       |       | Raisin City Field Collection System   | 4"                             | 650                | 800                             | 800                           | 800                         |

SHEET 4 OF 27 SHEETS

P O A E CO.

DRAWING NUMBER  
086868

REV  
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- (1) This Section of L-105A at MP 2.03 is tied into the remainder of L-105A at MP 38.87.  
 (2) This Section of L-108 has a 175 psig MOP when operated in conjunction with the Pacific Paperboard Feeder.

| Trans. Line No. | MP    | to | MP    | Description  | Nominal Pipe Diameter | MOP (psig)         | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|-------|----|-------|--|-----------------------|--------------------|---------------------------------|-------------------------------|-----------------------------|
|                 |       |    |       |  | (Inches)              |                    |                                 |                               |                             |
| 111             |       |    |       | San Joaquin Field Collection System  | 3", 4"                | 650                | 800                             | 960                           | 960                         |
| 112             |       |    |       | Strangeman Well 1-1 to L-108 MP 1.98   | 4"                    | 500                | 594                             | 720                           | 720                         |
| 112             |       |    |       | Vernalis Field Collection System   | 3" - 8"               | 594                | 594                             | 800                           | 890                         |
| 114             | 0.00  |    | 9.01  | Rio Vista Field West Side to Antioch Terminal  | 12", 16"              | 510                | 510                             | 800                           | 800                         |
| 114             | 7.33  |    | 8.31  | San Joaquin River Crossing--Block Valve 7.46 on Stanpac Line 4 to Block Valve 8.31 on Line 114 | 12"                   | 720                | 800                             | 800                           | 800                         |
| 114             | 9.01  |    | 16.59 | Antioch Terminal to Brentwood Terminal   | 22"                   | 510 <sup>(3)</sup> | 800                             | 800                           | 800                         |
| 114             | 16.59 |    | 28.97 | Brentwood Terminal to Dalton Avenue Station  | 22"                   | 595 <sup>(4)</sup> | 595                             | 595                           | 720                         |
| 114             | 28.97 |    | 33.85 | Dalton Avenue Station to Livermore Junction  | 22"                   | 595                | 595                             | 595                           | 720                         |
| 115             |       |    |       | Petaluma Gas Field   | 36"                   | 595                | 595                             | 595                           | 720                         |
| *116            | 0.00  |    | 3.86  | Davis Meter and Reg Station to Swingle Junction Meter and Reg Station                          | 2"                    | 450                | 675                             | 675                           | 675                         |
| *116            | 3.86  |    | 6.18  | Swingle Junction Meter and Reg Station to MP-6.18  | 8"                    | 500                | 500                             | 500                           | 800                         |
| 116             | 6.18  |    | 9.60  | MP-6.18 to Block Valve 9.60  | 16"                   | 500                | 800                             | 800                           | 720                         |
| 116             | 9.60  |    | 12.89 | MP-9.60 to Sacramento Division Gas Load Center   | 8", 24", 16"          | 500                | 500                             | 500                           | 720                         |
| *118            | 0.00  |    | 6.09  | San Joaquin Division Gas Load Center to Fresno Junction  | 8"                    | 400                | 400                             | 500                           | 500                         |
| 118             | 0.00  |    | 0.66  | San Joaquin Division Gas Load Center to Fresno Underground Holder                              | 8"                    | 400                | 400                             | 500                           | 500                         |
| *118            | 5.86  |    | 12.57 | Fresno Junction to MP 12.57  | 12"                   | 690                | 690                             | 720                           | 720                         |
| *118            | 12.57 |    | 73.26 | MP 12.57 to Livingston Reg Station   | 12"                   | 400                | 400                             | 720                           | 720                         |
| 118             | 0.00  |    | 39.81 | Herndon Junction to Pioneer Road   | 8"                    | 400                | 400                             | 500                           | 500                         |
| 118             | 73.26 |    | 74.89 | Livingston Reg Station to Collier Road   | 12"                   | 400                | 400                             | 720                           | 720                         |
| 118             | 74.89 |    | 83.74 | Collier Road to Bradbury Road Reg Station  | 6", 8"                | 400                | 720                             | 720                           | 720                         |
| 118             | 78.08 |    | 83.74 | MP 78.08 to Bradbury Road Reg Station  | 6", 8"                | 400                | 400                             | 400                           | 720                         |
| 118             | 83.74 |    | 84.69 | Bradbury Road Reg Station to MP 84.69 (L-215 Tap) Parallel                                     | 8"                    | 400                | 720                             | 720                           | 720                         |
|                 |       |    |       |  | 6", 8"                | 500                | 890                             | 890                           | 890                         |

(3) This section of Line 114 has a 510 psig MOP when Block Valve 8.31 is open.  
(4) This section of Line 114 has a 438 psig MOP when Valve #5 at Antioch is open.

LINES OPERATING AT OR OVER 20% SMS

P & E CO.  
SHEET 5 OF 27 SHEETS

DRAWING NUMBER  
086868

REV.  
8

LINES OPERATING AT OR OVER 20% SMYS

| Trans. Line No. | MP    | to | MP    | Description  | Nominal Pipe Diameter (Inches) | MOP (psig)         | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|-------|----|-------|--|--------------------------------|--------------------|---------------------------------|-------------------------------|-----------------------------|
| 119             | 0.00  |    | 3.85  | Davis Meter Station to Swingle Junction Reg and Meter Station          | 12"                            | 792                | 792                             | 800                           | 800                         |
| 119             | 3.85  |    | 4.85  | Swingle Junction Reg & Meter Station to MP 4.85                        | 12", 16"                       | 500                | 720                             | 720                           | 720                         |
| 119             | 4.85  |    | 11.14 | MP 4.85 to MP 11.14  | 12", 20"                       | 500                | 520                             | 720                           | 720                         |
| 119             | 11.14 |    | 11.35 | MP 11.14 to MP 11.35   | 10"                            | 500                | 520                             | 720                           | 720                         |
| 119             | 11.35 |    | 16.46 | MP 11.35 to N. Sacramento Underground Holder                           | 12"                            | 500                | 520                             | 720                           | 720                         |
| 119             | 0.00  |    | 10.17 | N. Sacramento Underground Holder to Antelope Meter Station             | 12", 16"                       | 500                | 500                             | 500                           | 600                         |
| 119             | 0.00  |    | 6.69  | N. Sacramento Underground Holder to Roseville Rd Reg Station           | 16"                            | 500                | 500                             | 500                           | 600                         |
| 119             | 0.00  |    | 7.85  | Roseville Rd Reg Station to Antelope Meter Station                     | 6", 16"                        | 500                | 500                             | 500                           | 600                         |
| 119             | 0.00  |    | 5.25  | Sonoma Avenue Reg and Del Pasa Blvd to Roseville Rd Reg Station        | 6"                             | 180                | 500                             | 500                           | 500                         |
| 120             |       |    |       | Sutter Creek Field Collection System                                   | 4", 6"                         | 485 <sup>(5)</sup> | 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 Underground Holder        | 6"                             | 485                | 485                             | 720                           | 720 <sup>(6)</sup>          |
| 123             | 0.00  |    | 13.57 | Antelope Meter Station to Lincoln Junction Reg Station                 | 12"                            | 500                | 500                             | 670                           | 670                         |
| 124             | 0.00  |    | 23.46 | Lincoln Junction Reg Station to Marysville Service Center Reg Station  | 8"                             | 400                | 400                             | 720                           | 720                         |
| 124             | 0.00  |    | 26.03 | Lincoln Junction Reg Station to Yuba City Underground Holder           | 16"                            | 600                | 600                             | 720                           | 720                         |
| 124             | 0.00  |    | 3.76  | Beale Air Force Base Tap (T 13.31) to Beale Air Force Base Reg Station | 6"                             | 400                | 400                             | 720                           | 720                         |
| 125             |       |    |       | Edwards Vicenus to Tompkins Hill Meter and Reg Station                 | 4"                             | 350                | 448                             | 720                           | 720                         |
| 125             |       |    |       | Tompkins Hill Field Collection System                                  | 2", 3", 4", 6"                 | 448                | 448                             | 720                           | 720                         |

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

(6) The future design pressure was reduced to 720 psig to be consistent with the design pressure.

SHEET 6 OF 27 SHEETS

P O A E C O.

DRAWING NUMBER REV  
086868 8

LINES OPERATING AT OR OVER 20% SMYS

| Trans. Line No. | MP    | to MP | Description  | Nominal Pipe Diameter (Inches)     | MOP (psig)       | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|-------|-------|--|------------------------------------|------------------|---------------------------------|-------------------------------|-----------------------------|
| 126             | 0.00  | 10.57 | Tompkins Hill Meter & Reg Station to Union Street Reg Station        | 4"                                 | 350              | 425                             | 720                           | 425                         |
| 126             | 0.00  | 10.89 | Tompkins Hill Meter Station to Union Street Reg Station              | 6"                                 | 350              | 425                             | 720                           | 425                         |
| 126             | 0.00  | 3.62  | Elk River Road Reg Station to T 12.38, Line 126                      | 10"                                | 167              | 167                             | 713                           | 600                         |
| *126            | 0.00  | 0.36  | MP 0.00 to Eureka Manifold Propane Air Plant                         | 10"                                | 167              | 167                             | 713                           | 600                         |
| 126             | 10.89 | 12.61 | Union Street Reg Station to Line 137                                 | 6"                                 | 167              | 167                             | 713                           | 275                         |
| 128             | 0.00  | 8.35  | Ord Bend Meter Station to Willows Town Reg                           | 3", 4"                             | 479              | 720                             | 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  | Rio Vista Field East Side  | 12"                                | 510              | 685                             | 800                           | 720                         |
| 131             | 0.00  | 9.19  | Rio Vista Field East Side to Antioch Terminal                        | 10", 12"                           | 720(8)<br>510(9) | 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                         |
| 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  | 12", 16",<br>24", 30",<br>34", 36" | 375              | 400                             | 400                           | 400                         |
| 132             | 35.84 | 46.59 | MP 35.84 to Martin Station Reg Station                               | 30", 36"                           | 390              | 390                             | 400                           | 400                         |
| 132             | 46.59 | 51.50 | Martin Station Reg Station to San Francisco Division Gas Load Center | 24"                                | 145              | 145                             | 275                           | 275                         |
| 132A            | 0.00  | 1.50  | Sierra Vista Avenue Crossover to Rengstorff Avenue Station           | 16", 24"                           | 400              | 400                             | 400                           | 400                         |
| 132B            | 0.00  | 0.35  | Martin Station Reg Station to Geneva Avenue                          | 20"                                | 109              | 110                             | 275                           | 275                         |
| 133             |       |       | Gill Ranch Field Collection System                                   | 4"                                 | 500              | 500                             | 500                           | 720                         |
| 134             | 0.00  | 21.57 | Herndon Junction to MP 21.57   | 6", 8"                             | 500              | 500                             | 720                           | 720                         |

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

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

P G & E CO.  
SHEET 7 OF 27 SHEETS

DRAWING NUMBER  
086868

REV  
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LINES OPERATING AT OR OVER 20% SWS

| Trans. Line No. | MP    | to MP | Description   | Nominal Pipe Diameter (Inches) | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|-------|-------|---|--------------------------------|------------|---------------------------------|-------------------------------|-----------------------------|
| 134             | 21.57 | 27.04 | MP 21.57 to Arbios Reg Station  | 6"                             | 500        | 500                             | 720                           | 720                         |
| 134             | 27.04 | 30.50 | Arbios Reg Station to MP 30.50  | 6", 8"                         | 500        | 500                             | 720                           | 720                         |
| 134             |       | 34.13 | Arbios Reg Station to Firebaugh Regulator Station                       | 3", 4"                         | 500        | 500                             | 720                           | 720                         |
| 134             |       |       | Dixon Dryer DFM   | 4"                             | 500        | 500                             | 720                           | 720                         |
| 136             | 0.00  | 1.65  | Ord Bend Meter Station to MP 1.65                                       | 6"                             | 479        | 565                             | 720                           | 720                         |
| 136             | 5.14  | 12.89 | Fell Reg & Odorizer Station to Butte Station                            | 6"                             | 550        | 550                             | 720                           | 720                         |
| *137            | 0.00  | 11.83 | 14th and Albee Streets, Eureka, to Arcata Reg Station                   | 8"                             | 550        | 720                             | 720                           | 720                         |
| 137             | 3.58  | 7.37  | Ryan Slough Reg Station to Arcata Reg Station                           | 4", 6"                         | 167        | 167                             | 275                           | 275                         |
| 138A            | 0.00  | 14.94 | Helm Tap Station to Helm Junction                                       | 8"                             | 350        | 350                             | 720                           | 600                         |
| 138B            | 0.00  | 14.71 | Helm Tap Station to Helm Junction                                       | 16"                            | 800(10)    | 862                             | 862                           | 862                         |
| 138             | 14.71 | 20.50 | Helm Junction to Elkhorn Station  | 20"                            | 700        | 700                             | 800                           | 890                         |
| 138             | 20.50 | 22.04 | Elkhorn Station to Burrel Meter Station                                 | 18"                            | 800(10)    | 865                             | 865                           | 890                         |
| 138             | 22.04 | 38.59 | Burrel Meter Station to Adams & Elm Meter and Regulator Station         | 18"                            | 650        | 650                             | 865                           | 720                         |
| 138             | 38.59 | 49.42 | Adams & Elm Meter & Reg Station to San Joaquin Division Gas Load Center | 16"                            | 650        | 650                             | 720                           | 720                         |
| 138             | 43.58 | 50.02 | T 43.58 to Chestnut & Clay Reg Station                                  | 16"                            | 650        | 650                             | 720                           | 720                         |
| 138             | 45.10 | 46.64 | MP 45.10 to Peach Avenue  | 10"                            | 650        | 720                             | 720                           | 720                         |
| 141E            |       |       | E Thornton Field Collection System                                      | 4", 6"                         | 538        | 538                             | 800                           | 800                         |
| 141W            |       |       | W Thornton Field Collection System                                      | 3" - 10"                       | 538        | 768                             | 800                           | 800                         |
| *141            |       |       | N.E. River Island & Walnut Grove Field Collection System                | 6", 8"                         | 538        | 768                             | 800                           | 800                         |
| 142N            | 0.00  | 14.05 | Bakersfield Tap to Bakersfield Reg Station                              | 12", 16", 20"                  | 475        | 475                             | 720                           | 720                         |
| 142S            | 0.00  | 9.00  | Gosford Road Meter Station to Brundage Lane & "V" St Regulator          | 6", 10"                        | 600        | 600                             | 720                           | 720                         |
| *142S           | 9.00  | 11.47 | Brundage Lane & "V" St Regulator to Bakersfield Reg Station             | 8", 12"                        | 300        | 300                             | 720                           | 300                         |
| *143            |       |       | Millar Field Collection System  | 3", 4"                         | 792        | 800                             | 800                           | 800                         |
| 144             | 0.00  | 3.50  | Millar Field to Millar Meter Station                                    | 10", 12"                       | 792        | 796                             | 800                           | 800                         |

SHEET 8 OF 27 SHEETS

P O A R E CO.  
DRAWING NUMBER  
086868

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

LINES OPERATING AT OR OVER 20% SWS

SHEET 9 OF 27 SHEETS

P O A E CO.

DRAWING NUMBER

REV

086868

8

| Trans. Line No. | MP    | to | MP    | Description  | Nominal Pipe Diameter (Inches) | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|-------|----|-------|--|--------------------------------|------------|---------------------------------|-------------------------------|-----------------------------|
| 145             |       |    |       | Maine Prairie Field Collection System                              | 3", 4", 6"                     | 510        | 796                             | 800                           | 800                         |
| 146             | 0.00  |    | 6.00  | Maine Prairie Field to Maine Prairie Meter Station                 | 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 Regulator Station      | 8"                             | 408        | 408                             | 720                           | 720                         |
| 149             |       |    |       | Winters Field Collection System                                    | 4", 6"                         | 720        | 750                             | 800                           | 800                         |
| 150             | 0.00  |    | 18.09 | Winters Meter Station to Davis Meter Station                       | 6"                             | 720        | 750                             | 800                           | 800                         |
| 151             | 0.53  |    | 14.05 | MP 0.53 to Afton Reg Station                                       | 6"                             | 250        | 250                             | 720                           | 720                         |
| 153             | 0.00  |    | 18.00 | Irvington Station to Marina Blvd Station                           | 30", 32", 34"                  | 420        | 420                             | 500                           | 500                         |
| *153            | 18.00 |    | 27.89 | Marina Blvd Station to East Bay Div Gas Load Center                | 24", 30"                       | 246        | 246                             | 275                           | 275                         |
| 153             |       |    |       | Tap to 50th Avenue Holder  | 16", 20"                       | 246        | 246                             | 275                           | 275                         |
| 153             |       |    |       | Tap to East Bay Div Gas Load Center                                | 20"                            | 246        | 246                             | 275                           | 275                         |
| 153             |       |    |       | Alvarado Crossover & Reg Station to Line 105                       | 16"                            | 246        | 250                             | 500                           | 500                         |
| *153            |       |    |       | Fairway Avenue Crossover Station 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             | 4.80  |    | 11.06 | V-4.80 to L-172 (MP 11.06)   | 6"                             | 800        | 800                             | 800                           | 800                         |
| 158             | 11.06 |    | 13.65 | MP 11.06 to Dunnigan Spreckels Reg Station                         | 6"                             | 500        | 564                             | 800                           | 800                         |
| 158             |       |    |       | Woodland Field Collection System                                   | 3", 4"                         | 800        | 800                             | 800                           | 800                         |
| 159             | 0.00  |    | 0.65  | Pleasant Creek Field Compressor Station to V-0.65                  | 4"                             | 975        | 975                             | 1000                          | 975                         |
| 159             | 0.65  |    | 3.91  | V-0.65 to Pleasant Creek Line 159 Regulator Station                | 4"                             | 975        | 975                             | 1000                          | 975                         |
| 159             | 3.91  |    | 4.70  | Pleasant Creek Line 159 Regulator Station to Winters Meter Station | 4", 8"                         | 720        | 750                             | 800                           | 975                         |
| 159             |       |    |       | Winters Field Collection System                                    | 4"                             | 720        | 750                             | 800                           | 975                         |
| *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                         |

LINES OPERATING AT OR OVER 20% SMYS

| Trans. Line No. | MP    | to MP | Description  | Nominal Pipe Diameter (Inches) | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|-------|-------|--|--------------------------------|------------|---------------------------------|-------------------------------|-----------------------------|
| 164             |       |       | Coalinga Nose Field Collection System  | 8", 10"                        | 390        | 498                             | 865                           | 890                         |
| 167             | 0.00  | 34.50 | Beehive Bend Field to Yuba City Underground Holder   | 12", 16"                       | 800        | 800                             | 800                           | 800                         |
| 167             | 0.00  | 4.60  | Wild Goose Field Meter Station to Wild Goose Mixer & Odorizer Sta                          | 10"                            | 800        | 800                             | 800                           | 800                         |
| 167             | 4.60  | 6.54  | Wild Goose Mixer & Odorizer Station to Gridley Junction Station                            | 8"                             | 800        | 800                             | 800                           | 800                         |
| 167             |       |       | Wild Goose Field Collection System   | 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  | 3", 4", 6"                     | 800        | 800                             | 800                           | 800                         |
| 167             |       |       | Bounde Creek Field Collection System   | 2" - 6"                        | 800        | 800                             | 800                           | 800                         |
| 168             |       |       | River Island Field Collection System   | 2" - 8"                        | 800        | 800                             | 800                           | 800                         |
|                 |       |       |  |                                | 720(11)    |                                 |                               |                             |
| 169             |       |       | Beehive Bend, Willows, Llano Seco & Perkins Lake Field Collection System                   | 3" - 20"                       | 800        | 800                             | 800                           | 800                         |
| 172             | 0.00  | 69.81 | Beehive Bend Field, West, Meter & Odorizer Station to Swingle Junction Reg & Meter Station | 18", 20"                       | 800        | 800                             | 800                           | 800                         |
| 172             |       |       | Sugarfield Field Collection System   | 2" - 4"                        | 800        | 800                             | 800                           | 800                         |
| 172             |       |       | Dufour Field Collection System   | 3", 4"                         | 800        | 800                             | 800                           | 800                         |
| 172             | 69.81 | 79.12 | Swingle Junction Reg & Meter Station to Sacramento Div Gas Load Center                     | 12", 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 | Turkey Ranch Meter Station to Auburn Reg Station   | 4", 6", 8"                     | 500        | 500                             | 670                           | 670                         |
| *174            |       |       | Arbuckle Field Collection System   | 2" - 10"                       | 800        | 800                             | 800                           | 800                         |
| 176             |       |       | Roberts Island Field Collection System   | 2" - 8"                        | 500        | 555                             | 800                           | 890                         |
| 176             | 0.00  | 18.85 | Roberts Island Field to Tracy Station  | 6", 8"                         | 500        | 555                             | 800                           | 720                         |
| 177             | 0.00  | 0.87  | Sacramento Avenue Junction to Grape Way Regulator Station                                  | 10"                            | 819        | 819                             | 960                           | 960                         |
| 177             | 0.86  | 7.13  | Grape Way Reg Station to Butte Station   | 6", 10"                        | 469        | 469                             | 600                           | 720                         |

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

P O & E CO.  
SHEET 10 OF 27 SHEETS

DRAWING NUMBER  
086868  
REV  
8

| Trans. Line No. | MP     | to | MP     | Description  | Nominal Pipe Diameter (Inches) | NOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|--------|----|--------|--|--------------------------------|------------|---------------------------------|-------------------------------|-----------------------------|
|                 |        |    |        |  |                                |            |                                 |                               |                             |
| 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 PL Station                   | 12"                            | 819        | 819                             | 960                           | 960                         |
| 177             | 163.04 |    | 178.18 | Cummings Creek PL Station to Tompkins Hill Meter & Regulator Station     | 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   | Red Bluff Tap to Red Bluff and Diamond National Corp.                    | 6"                             | 819        | 819                             | 960                           | 960                         |
| 179             |        |    |        | Corning Field, South, Collection System                                  | 6"                             | 819        | 819                             | 960                           | 960                         |
| 181A            | 0.00   |    | 1.56   | Soap Lake Meter Station to Gentry Foods Regulator Station                | 6", 10", 12", 16"              | 300        | 300                             | 400                           | 400                         |
| 181A            | 6.19   |    | 20.15  | V-6.19 to Watsonville  | 10", 12"                       | 300        | 303                             | 400                           | 400                         |
| 181B            | 0.00   |    | 10.85  | Anzar Road Meter and Regulator to Watsonville Station                    | 10", 16", 20"                  | 400        | 400                             | 400                           | 400                         |
| *182            | 0.00   |    | 12.86  | Serpa "Y" to V-12.86, Suisun Junction                                    | 8" - 10"                       | 510        | 510                             | 800                           | 800                         |
| 182             | 12.86  |    | 18.23  | V-12.86 to Shell Chemical Meter Station                                  | 12"                            | 435        | 435                             | 800                           | 800                         |
| *182            | 18.23  |    | 18.87  | Shell Chemical Meter Station to Bailey Road Meter and Regulator Sta.     | 12"                            | 435        | 435                             | 600                           | 800                         |
| 182             |        |    |        | Kirby Hills Field Collection System                                      | 3" - 8"                        | 510        | 510                             | 800                           | 800                         |
| 182             |        |    |        | Suisun Field Collection System   | 2" - 6"                        | 510        | 510                             | 800                           | 800                         |
| 183             | 0.00   |    | 6.35   | Moffat Ranch Field Meter & Reg Station to Firebaugh Regulator Station    | 3"                             | 175        | 320                             | 800                           | 800                         |
| 185             | 0.00   |    | 0.014  | Hollister Gas Field Tie to Main 301A                                     | 4"                             | 396        | 396                             | 600                           | 500                         |
| 186             | 0.00   |    | 26.1   | Red Top Regulator to Dos Palos Meter Station                             | 3", 4", 6"                     | 500        | 625                             | 720                           | 720                         |
| 186             | 26.1   |    | 29.4   | Chowchilla Field to Red Top Regulator Station                            | 2", 3", 4"                     | 500        | 960                             | 960                           | 960                         |

LINES OPERATING AT OR OVER 20% SWS

SHEET 11 OF 27 SHEETS

P O A E CO.

DRAWING NUMBER 086868

REV. 8



| Trans. Line No. | MP    | to MP | Description  | Nominal Pipe Diameter (Inches) | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|-------|-------|--|--------------------------------|------------|---------------------------------|-------------------------------|-----------------------------|
|                 |       |       |  |                                |            |                                 |                               |                             |
| *187            | 0.00  | 22.58 | San Ardo Field 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  | Humboldt Bay PP Tap to Humboldt Bay PP                             | 10"                            | 350        | 425                             | 720                           | 600                         |
| 190             | 0.00  | 16.08 | Kettleman Compressor Station to Coalinga Nose Dehydrator Station   | 12", 16"                       | 2 160      | 2160                            | 2160                          | 2160                        |
| 190             | 16.08 | 16.22 | Coalinga Nose Dehydrator Station to Coalinga Nose Field            | 16"                            | 2 160      | 2160                            | 2160                          | 2160                        |
| 191             | 0.00  | 3.86  | Antioch Terminal to Antioch Town Meter Station                     | 30", 34"                       | 600        | 600                             | 600                           | 600                         |
| 191             |       |       | Antioch Town Meter Station Cross Tie                               | 16"                            | 600        | 600                             | 600                           | 600                         |
| 191             | 3.87  | 9.93  | MP 3.87 to SP 3-Line 191 Meter Sta Via Pittsburg Power Plant       | 20", 24"                       | 338        | 390                             | 600                           | 600                         |
| 191             | 9.93  | 25.30 | SP 3-Line 191 Meter Sta to Reliez Station Road Regulator Station   | 16", 20", 24"                  | 338        | 338                             | 600                           | 600                         |
| *191            | 25.30 | 29.36 | Reliez Station Road Regulator Station to The Junction              | 8", 10", 12"                   | 268        | 283                             | 400                           | 400                         |
| *191            | 29.36 | 32.76 | The Junction 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           |       |       | The Junction to Ardilla and Camino Pablo Regulator Station         | 3", 6", 8"                     | 268        | 283                             | 400                           | 400                         |
| *191B           | 0.00  | 1.53  | The Junction to Reliez Valley Road, Lafayette                      | 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             | 00.0  | 4.39  | McMullin Field Dehydrator Station to California Ammonia Company    | 6"                             | 440        | 440                             | 960                           | 800                         |
| 194             |       |       | McMullin Ranch Field Collection System                             | 2" - 10"                       | 440        | 440                             | 800                           | 800                         |
| 195             |       |       | Rio Vista Field, East Side Collection System (HP)                  | 2" - 16"                       | 800(12)    | 800                             | 800                           | 800                         |

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

LINES OPERATING AT OR OVER 20% SWS

P O R E C O .  
SHEET 12 OF 27 SHEETS

DRAWING NUMBER  
086868

REV  
8

| Trans. Line No. | MP    | to | MP    | Description  | Nominal Pipe Diameter (Inches) | MOP (psig)          | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|-------|----|-------|--|--------------------------------|---------------------|---------------------------------|-------------------------------|-----------------------------|
|                 |       |    |       |  |                                |                     |                                 |                               |                             |
| *195            |       |    |       | Rio Vista Field, East Side Collection System (LP)  | 2" - 16"                       | 510                 | 510                             | 800                           | 800                         |
| 196             |       |    |       | King Island Gas Field Collection System  | 4", 6"                         | 800                 | 800                             | 800                           | 800                         |
| 196A            | 0.00  |    | 13.45 | Isleton Meter Station to Las Vinas Station   | 8", 12"                        | 800 <sup>(13)</sup> | 800                             | 800                           | 800                         |
| 197A            | 0.00  |    | 21.41 | Las Vinas Station to Brandt Rd PLS   | 10"                            | 300                 | 388                             | 720                           | 720                         |
| 197A            | 21.41 |    | 31.23 | Brandt Rd PLS to MP 31.23  | 10", 12"                       | 300                 | 720                             | 720                           | 720                         |
| 197A            | 31.23 |    | 39.57 | MP 31.23 to MP 39.57   | 12"                            | 300                 | 320                             | 720                           | 720                         |
| 197A            | 39.57 |    | 41.78 | MP 39.57 to Calaveras Cement Meter Station   | 8"                             | 300                 | 320                             | 720                           | 720                         |
| 197B            | 0.00  |    | 5.50  | Las Vinas Station to V-5.50  | 6"                             | 300                 | 388                             | 720                           | 720                         |
| 197C            | 17.44 |    | 23.02 | Ione Tap to MP 23.02   | 10"                            | 300                 | 720                             | 720                           | 720                         |
| 199             |       |    |       | Bunker Field Collection System   | 3" - 8"                        | 792                 | 796                             | 800                           | 800                         |
| 200             |       |    |       | Rio Vista Field, West Side, Collection System (HP)   | 2" - 16"                       | 800 <sup>(13)</sup> | 800                             | 800                           | 800                         |
| *200            |       |    |       | Rio Vista Field, West Side, Collection System (LP)   | 2" - 16"                       | 510                 | 510                             | 800                           | 800                         |
| 200             | 0.00  |    | 6.51  | Rio Vista Field, West Side, Collection System (LP), Rio Vista "Y" Mixer Station to Serpa Junction Compressor Station | 12"                            | 510                 | 800                             | 800                           | 800                         |
| 200             |       |    |       | Rio Vista Field, West Side, Collection System (30 psig)  | 3" - 10"                       | 400                 | 510                             | 800                           | 800                         |
| 200             |       |    |       | Liberty Island Field Collection System   | 4"                             | 800                 | 800                             | 800                           | 800                         |
| 200             |       |    |       | Lindsey Slough Field Collection System   | 3" - 10"                       | 720 <sup>(13)</sup> | 868                             | 960                           | 960                         |
| 201             |       |    |       | Todhunters Lake Field Collection System  | 2" - 12"                       | 792                 | 960                             | 960                           | 960                         |
| 201             |       |    |       | Greens Lake Field Collection System  | 2"                             | 792                 | 960                             | 960                           | 960                         |
| 202             | 0.00  |    | 23.72 | Camp Far West Meter Station to Grass Valley Reg Station  | 6", 8"                         | 400                 | 720                             | 720                           | 720                         |
| 203             |       |    |       | Winchester Lake Field Collection System  | 3", 4"                         | 800                 | 800                             | 800                           | 960                         |
| 204             |       |    |       | Cheney Ranch Field Collection System   | 3", 4"                         | 500                 | 890                             | 890                           | 890                         |
| 206             |       |    |       | Pleasant Creek Tap to Pleasant Creek Field Compressor Station  | 12"                            | 975                 | 1440                            | 1440                          | 1440                        |
| 207             |       |    |       | Conway Ranch Field Collection System   | 4", 6", 8"                     | 800                 | 1000                            | 1000                          | 960                         |

(13) The MOP of this section of line is 720 psig when it is operated in conjunction with L-131.  
(14) Line 197B between M.P. 21.47 and M.P. 31.24 has been abandoned.

LINES OPERATING AT OR OVER 20% SMYS  
 P O A E CO.  
 SHEET 13 OF 27 SHEETS  
 DRAWING NUMBER  
 086868  
 REV  
 8

LINES OPERATING AT OR OVER 20% SMYS

| Trans. Line No. | MP     | to MP  | Description   | Nominal Pipe Diameter (Inches) | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|--------|--------|---|--------------------------------|------------|---------------------------------|-------------------------------|-----------------------------|
| 208             |        |        | Union Island Field to Lathrop Dehydrator Station                        | 12"                            | 825        | 1000                            | 1000                          | 1000                        |
| 209             |        |        | Johns Manville Reg Station to 5th & Garden, Willows                     | 4"                             | 479        | 720                             | 720                           | 720                         |
| 210             |        |        | Denverton Field Collection System                                       | 3", 4", 6"                     | 650        | 650                             | 720                           | 720                         |
| 210             | 0.00   | 1.40   | Rio Vista "Y" to Creed Station  | 16"                            | 800        | 800                             | 800                           | 800                         |
| 210             | 1.40   | 25.98  | Creed Station to Napa "Y" Meter Station                                 | 16", 18"                       | 650        | 650                             | 720                           | 720                         |
| 210             | 1.40   | 19.47  | Creed Station to Cordelia Reg Station                                   | 32", 34"                       | 650        | 675                             | 675                           | 675                         |
| 210             | 19.47  | 25.62  | Cordelia Regulator Station to Napa "Y" Meter Station                    | 10", 12"                       | 650        | 650                             | 675                           | 675                         |
| 210             | 0.00   | 1.36   | Rio Vista "Y" to Creed Station  | 10"                            | 650        | 650                             | 800                           | 800                         |
| 210             | 19.47  | 32.11  | Cordelia Reg Sta to Herrmann Station                                    | 24"                            | 650        | 675                             | 675                           | 675                         |
| 210             | 0.00   | 3.7    | Exxon Tap to Exxon Meter Station  | 18"                            | 650        | 720                             | 720                           | 675                         |
| 212             |        |        | Tremont Field Collection System   | 4", 6"                         | 792        | 800                             | 800                           | 800                         |
| 214             | 0.00   | 0.41   | Arcoma-Shriners No. 16-3 Gas Well                                       | 3", 4"                         | 315        | 600                             | 600                           | 600                         |
| 215             | 0.00   | 20.05  | Oak Flat Road Meter Sta to West Ave. Reg Station                        | 12"                            | 500        | 890                             | 890                           | 890                         |
| 220             | 0.00   | 2.41   | Rio Vista "Y" to Maine Prairie Meter & Reg Station                      | 16"                            | 792        | 800                             | 800                           | 800                         |
| 220             | 0.00   | 2.41   | Rio Vista "Y" to Maine Prairie Meter & Reg Station                      | 10"                            | 510        | 796                             | 800                           | 800                         |
| 220             | 2.41   | 22.01  | Maine Prairie Meter & Reg Station to Davis Meter and Reg Station        | 8", 10", 12"                   | 792        | 796                             | 800                           | 800                         |
| 220             | 22.01  | 34.46  | Davis Meter & Regulator Station to Dunnigan-Spreckels Regulator Station | 6", 8"                         | 500        | 500                             | 500                           | 800                         |
| 220             |        |        | Dixon Gas Field   | 4"                             | 792        | 796                             | 800                           | 800                         |
| 300             | 0.00   | 0.47   | Panoche Station to Line 2   | 24"                            | 500        | 840                             | 890                           | 890                         |
| 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                         |

(15) Line 213 has been abandoned.

P O & E CO.  
 SHEET 14 OF 27 SHEETS  
 DRAWING NUMBER 086868  
 REV 8

| Trans. Line No. | MP     | to MP  | Description   | Nominal Pipe Diameter | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|--------|--------|---|-----------------------|------------|---------------------------------|-------------------------------|-----------------------------|
|                 |        |        |   | (Inches)              |            |                                 |                               |                             |
| 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"                   | 757        | 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 PLS 6AX   | 34"                   | 715        | 715                             | 715                           | 715                         |
| 300A            | 461.07 | 490.65 | PLS 6AX to PLS 7A   | 34"                   | 631        | 631                             | 715                           | 715                         |
| 300A            | 490.65 | 502.34 | PLS 7A to Milpitas Terminal   | 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                         |
| 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"                   | 757        | 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 PLS 6BX   | 34"                   | 715        | 715                             | 715                           | 715                         |
| 300B            | 461.08 | 490.92 | PLS 6BX to PLS 7B   | 34"                   | 631        | 631                             | 715                           | 715                         |
| 300B            | 490.92 | 502.64 | PLS 7B to Milpitas Terminal   | 34"                   | 600        | 600                             | 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                             | 500                           | 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 Tap Station to First Avenue Reg Station, Fort Ord Reg Station | 16"                   | 408        | 412                             | 412                           | 412                         |
| *301E           | 0.00   | 0.89   | Crosstie-Monterey #2 to Main 301B   | 12"                   | 408        | 408                             | 500                           | 500                         |
| *301E           | 0.89   | 1.02   | Crosstie-Monterey #2 to Main 301B   | 12"                   | 313        | 313                             | 400                           | 400                         |
| 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                         |

(16) The MOP and MAOP of Line 302 were reduced to be equivalent to Line 302W.

LINES OPERATING AT OR OVER 20% SMYS

P G & E CO.  
SHEET 15 OF 27 SHEETS

DRAWING NUMBER  
086868

REV  
8

| Trans. Line No. | MP    | to | MP    | Description  | Nominal Pipe Diameter (Inches) | MOP (psig)          | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|-------|----|-------|--|--------------------------------|---------------------|---------------------------------|-------------------------------|-----------------------------|
|                 |       |    |       |  |                                |                     |                                 |                               |                             |
| 302             |       |    |       | Grimes Area Collection System <sup>(16)</sup>                                  | 2" - 20"                       | 975                 | 975                             | 1000                          | 975                         |
| 302W            | 0.00  |    | 5.76  | Hershey Junction to Buckeye Creek PLS  | 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"                            | 720 <sup>(17)</sup> | 793                             | 864                           | 864                         |
| 303             | 11.97 |    | 20.43 | Vasco Road to Dalton Avenue Station  | 36"                            | 720 <sup>(17)</sup> | 864                             | 864                           | 864                         |
| 303             | 20.43 |    | 25.54 | Dalton Avenue Sta to Livermore Junction  | 36"                            | 720 <sup>(17)</sup> | 864                             | 864                           | 864                         |
| 303             | 25.54 |    | 36.56 | Livermore Junction to Sheridan Road PL Sta                                     | 36"                            | 720                 | 731                             | 877                           | 877                         |
| 303             | 36.56 |    | 42.86 | Sheridan Road PL Station to Irvington Sta                                      | 36"                            | 590                 | 590                             | 600                           | 877                         |
| 304             | 0.00  |    | 11.29 | Lathrop Dehydrator & Odorizer Station to Tracy Station                         | 12"                            | 825                 | 825                             | 825                           | 825                         |
| 304             |       |    |       | Lathrop Field Collection System  | 3" - 12"                       | 825                 | 825                             | 825                           | 890                         |
| 306             | 0.00  |    | 43.3  | Kettleman Compressor Station to Dry Creek PL Station                           | 20"                            | 840                 | 840                             | 840                           | 840                         |
| 306             | 43.3  |    | 70.02 | Dry Creek PL Station to Morro Bay Power Plant Reg Station                      | 20"                            | 650                 | 650                             | 840                           | 840                         |
| 307             | 0.00  |    | 16.36 | Spreckels Sugar Meter Station to Spreckels Sugar Regulator Station             | 8"                             | 500                 | 500                             | 915                           | 890                         |
| 307             | 0.00  |    | 2.01  | Spreckels Sugar Meter Station  | 10"                            | 500                 | 890                             | 890                           | 890                         |
| 307             | 12.05 |    | 16.92 | Derrick Avenue Tap to Arbios Reg Station                                       | 8"                             | 500                 | 890                             | 915                           | 890                         |
| 308             | 0.00  |    | 0.140 | Collection Line 308 to Ginocchio 2   | 3"                             | 438                 | 495                             | 720                           | 720                         |
| 308             | 0.00  |    | 0.118 | Collection Line 308 to Ginocchio 1   | 3"                             | 438                 | 495                             | 720                           | 720                         |
| 308             | 0.00  |    | 0.093 | Collection Line 308 to Producers Tank Battery                                  | 4"                             | 438                 | 495                             | 720                           | 720                         |
| 310             | 0.00  |    | 38.25 | Tres Pinos Creek Station to BAF Cogeneration Facility                          | 10", 12"                       | 840                 | 890                             | 890                           | 890                         |
| 311             | 0.00  |    | 54.44 | Trona Tap Meter Station to Westend Primary Regulator Station                   | 10", 12"                       | 700                 | 700                             | 960                           | 890                         |
| 311             | 31.97 |    | 38.49 | Parallel Section to MP 38.49   | 12"                            | 700                 | 810                             | 960                           | 890                         |
| 312             | 0.00  |    | 8.00  | Paloma to Paloma Field Meter Station   | 8"                             | 757                 | 757                             | 820                           | 820                         |
| 313             | 0.00  |    | 34.4  | Lucerne Valley Tap Meter Station to Kaiser Cement Company Meter Station        | 8", 10"                        | 573                 | 573                             | 720                           | 573                         |
| 314             | 0.00  |    | 24.19 | Hinkley Compressor Station to PLS  | 12"                            | 861                 | 861                             | 890                           | 890                         |
| *314            | 24.19 |    | 29.00 | PLS to Southwest Portland Cement Meter & Reg Station                           | 10"                            | 550                 | 550                             | 720                           | 720                         |
| *314            | 29.00 |    | 43.18 | Southwest Portland Cement Meter & Reg Sta. to Black Mountain Meter & Reg. Sta. | 8", 10"                        | 550                 | 550                             | 720                           | 720                         |

17) Division regulation, cross-tied to Line 114 and Line 303, can operate at pressures up to 600 psig. If it becomes necessary to feed regulation from Line 303, then the Line 303 MOP becomes 600 psig.

LINES OPERATING AT OR OVER 20% SMYS

SHEET 16 OF 27 SHEETS

P & A E CO.

DRAWING NUMBER 086868

REV 8

LINES OPERATING AT OR OVER 20% SMYS

SHEET 17 OF 27 SHEETS

P G & E CO.

DRAWING NUMBER  
086868

REV  
8

| Trans. Line No. | MP     | to | MP     | Description  | Nominal Pipe Diameter (Inches) | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|--------|----|--------|--|--------------------------------|------------|---------------------------------|-------------------------------|-----------------------------|
| *314            |        |    |        | Tap to Riverside Cement  | 8"                             | 550        | 550                             | 720                           | 720                         |
| *314            |        |    |        | Tap to Airbase Road Meter Station  | 8"                             | 550        | 550                             | 720                           | 720                         |
| *316            |        |    |        | Dutch Slough Area Collection System  | 2" - 12"                       | 800        | 800                             | 800                           | 800                         |
| 318             |        |    |        | Black Butte Field Collection System  | 3", 4", 6"                     | 911        | 911                             | 960                           | 960                         |
| 319             | 0.00   |    | 9.00   | "Gosford Intertie" Kern River Station<br>PGandE to Coles Levee Reg Station<br>P.L.S. Co. | 34"                            | 757        | 1440                            | 1440                          | 1440                        |
| 331             |        |    |        | Santa Nella Tap to Tri Valley Growers  | 4", 6"                         | 500        | 890                             | 890                           | 890                         |
| 335             |        |    |        | Putah Sink Field   | 3", 4"                         | 800        | 800                             | 800                           | 800                         |
| 336             |        |    |        | Harte Field Collection System  | 3"                             | 412        | 800                             | 800                           | 800                         |
| 337             |        |    |        | Zamora Gas Field   | 3", 4"                         | 800        | 800                             | 800                           | 800                         |
| *338            |        |    |        | Kettleman City Field Collection System   | 2"                             | 669        | 669                             | 688                           | 688                         |
| 339             | 0.00   |    | 0.87   | Rancho Capay Field Collection System   | 4"                             | 819        | 819                             | 960                           | 960                         |
| 341             | 0.00   |    | 0.01   | Tulare Lake Field Collection System  | 6"                             | 688        | 688                             | 720                           | 720                         |
| 342             | 0.00   |    | 2.18   | Mtn. View Gas Field @ T-257.75B, L-300   | 3"                             | 757        | 757                             | 960                           | 960                         |
| 372             | 0.00   |    | 3.7    | Ridgecrest Tap to Ridgecrest Primary<br>Regulator Station                                | 6"                             | 700        | 700                             | 960                           | 960                         |
| 374             | 0.00   |    | 0.01   | Semi-Tropic Gas Field @ T-309.62B, L-300   | 2"                             | 890        | 890                             | 890                           | 890                         |
| 375             | 0.00   |    | 17.41  | L-142 Tap to PSE   | 8", 12", 16"                   | 475        | 833                             | 833                           | 833                         |
| 376             | 0.00   |    | 1.67   | Tenneco Cork Lease   | 6", 8", 10"                    | 780        | 780                             | 833                           | 833                         |
| 400             | 0.00   |    | 24.60  | California-Oregon Border to Tionesta<br>Compressor Station                               | 36"                            | 911        | 911                             | 911                           | 911                         |
| 400             | 24.60  |    | 48.64  | Tionesta Compressor Station to Indian<br>Springs PL Station                              | 36"                            | 911        | 911                             | 911                           | 911                         |
| 400             | 48.64  |    | 82.33  | Indian Springs PL Station to Burney<br>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 PL Station  | 36"                            | 911        | 915                             | 942                           | 942                         |
| 400             | 115.26 |    | 149.18 | Shingletown PL Station to Gerber<br>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                         |

(18) Line 334 has been abandoned.

LINES OPERATING AT OR OVER 20% SMS

| Trans. Line No. | MP     | to MP  | Description  | Nominal Pipe Diameter (Inches) | MOP (psig)          | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design Press. (psig) |
|-----------------|--------|--------|--|--------------------------------|---------------------|---------------------------------|-------------------------------|-----------------------------|
| 400             | 197.72 | 233.87 | Delevan Compressor Station to Buckeye Creek PL Station | 36"                            | 1 040               | 1040                            | 1040                          | 1040                        |
| 400             | 233.87 | 297.87 | Buckeye Creek PL Station to Antioch Terminal           | 26", 36"                       | 975                 | 975                             | 975                           | 975                         |
| 402             | 0.00   | 9.96   | Redding-Calaveras Tap to PL Station                    | 12"                            | 500                 | 600                             | 720                           | 720                         |
| 402             | 9.96   | 38.10  | PL Station to Calaveras Cement Co.                     | 8", 10", 12"                   | 500                 | 600                             | 720                           | 720                         |
| 403             | 0.00   | 1.38   | Rio Vista "Y" to Creed Station                         | 16"                            | 650 <sup>(19)</sup> | 800                             | 855                           | 800                         |
| 404             | 0.00   | 1.64   | Tamarack Rd. to Burney Forest Products                 | 4"                             | 911                 | 911                             | 911                           | 911                         |

P O A E C O.  
SHEET 18 OF 27 SHEETS

DRAWING NUMBER  
086868

REV  
8

(19) The MOP of L-403 is 650 when operated in conjunction with L-210.

LINES OPERATING AT OR OVER 20% SMYS

| Location | Nominal<br>Pipe<br>Diameter<br>(Inches) | MOP<br>(psig) | Min MAOP<br>for any<br>Segment<br>(psig) | Min DP<br>for any<br>Segment<br>(psig) | Future<br>Design<br>(psig) |
|----------|---|---------------|--|--|----------------------------|
|----------|---|---------------|--|--|----------------------------|

EAST BAY REGION

BAY DIVISION

|                     |        |     |     |     |     |
|---------------------|--------|-----|-----|-----|-----|
| Port Costa Feeder   | 4", 6" | 315 | 338 | 600 | 600 |
| Standard Oil Feeder | 22"    | 400 | 400 | 400 | 400 |
| Union Oil Tap       | 12"    | 400 | 400 | 400 | 400 |

CENTRAL DIVISION

|  |          |     |     |     |     |
|--|----------|-----|-----|-----|-----|
| 50th Avenue Holder Feeder Off Line 105 | 16", 20" | 150 | 198 | 275 | 275 |
|--|----------|-----|-----|-----|-----|

DIABLO DIVISION

|   |                     |     |     |     |     |
|---|---------------------|-----|-----|-----|-----|
| Foster-Wheeler Feeder   | 8", 12"             | 315 | 338 | 600 | 600 |
| Tosco Oil Company Feeder  | 12"                 | 315 | 338 | 600 | 600 |
| Nichols Road Tap  | 4"                  | 338 | 338 | 600 | 600 |
| Pittsburg Town Feeder   | 12"                 | 338 | 338 | 600 | 600 |
| Concord Feeder to Alpha Beta Regulator  | 8"                  | 338 | 600 | 600 | 600 |
| Concord Feeder  | 6", 8",<br>10", 12" | 170 | 170 | 600 | 600 |
| Antioch Feeder  | 6"                  | 338 | 600 | 600 | 600 |
| Danville Feeder   | 6", 8",<br>10"      | 338 | 365 | 600 | 600 |
| Discover Bay Feeder - From Line 57A<br>to Secondary Stage Regulator (Bixler Road) | 3", 4"              | 867 | 867 | 867 | 867 |
| Discovery Bay Feeder - From Bixler Road<br>Regulator to Pt. of Timber Regulator   | 4", 6"              | 400 | 400 | 400 | 400 |
| Viera Avenue Feeder   | 8"                  | 338 | 338 | 600 | 600 |

SHEET 19 OF 27 SHEETS

P & A E CO.

DRAWING NUMBER  
086868

REV  
8



| Location  | Nominal Pipe Diameter (Inches)  | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design (psig) |
|---|---------------------------------|------------|---------------------------------|-------------------------------|----------------------|
|   | <u>EAST BAY REGION (Cont'd)</u> |            |                                 |                               |                      |
| <u>MISSION DIVISION</u>   |                                 |            |                                 |                               |                      |
| Pacific States Steel Feeder   | 8", 12"                         | 411        | 420                             | 500                           | 500                  |
| Caltran Sta. 2.35 to 6.35   | 12"                             | 411        | 411                             | 500                           | 500                  |
| <u>San Ramon Valley Feeder</u>                                      | 12"                             | 500        | 656                             | 656                           | 650                  |
| <u>Santa Rita Feeder</u>  | 6", 12",<br>16"                 | 500        | 656                             | 656                           | 650                  |
| Warm Springs Feeder   | 4"                              | 590        | 650                             | 650                           | 650                  |
| <u>GOLDEN GATE REGION</u>   |                                 |            |                                 |                               |                      |
| <u>SKYLINE DIVISION(18)</u>   |                                 |            |                                 |                               |                      |
| Peninsula Main  | 16"                             | 109        | 110                             | 275                           | 275                  |
| <u>SAN FRANCISCO DIVISION</u>                                       |                                 |            |                                 |                               |                      |
| Peninsula Main  | 16", 20"                        | 109        | 110                             | 275                           | 275                  |
| Hunters Point Power Plant Feeder                                    | 20"                             | 145        | 145                             | 275                           | 275                  |
| <u>PENINSULA DIVISION</u>   |                                 |            |                                 |                               |                      |
| Half Moon Bay Feeder Line   | 8", 10",<br>12"                 | 375        | 400                             | 400                           | 400                  |
| <u>MISSION TRAIL REGION</u>   |                                 |            |                                 |                               |                      |
| <u>COAST DIVISION</u>   |                                 |            |                                 |                               |                      |
| Santa Cruz to Davenport   | 10", 12"                        | 300        | 303                             | 557                           | 400                  |
| Watsonville to Santa Cruz   | 8", 10",<br>12", 16",<br>20"    | 300        | 303                             | 577                           | 400                  |
| (18) Skyline Division was formerly North San Mateo County Division. |                                 |            |                                 |                               |                      |

LINES OPERATING AT OR OVER 20% SMYS

SHEET 20 OF 27 SHEETS

P O & C O.

DRAWING NUMBER  
086868

REV  
8

LINES OPERATING AT OR OVER 20% SMYS

SHEET 21 OF 27 SHEETS

P O R C O .

DRAWING NUMBER

086868

REV

8

| Location   | Nominal Pipe Diameter (Inches) | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design (psig) |
|--|--------------------------------|------------|---------------------------------|-------------------------------|----------------------|
| <b>MISSION TRAIL REGION (Cont'd)</b>   |                                |            |                                 |                               |                      |
| <b>COAST DIVISION (Cont'd)</b>   |                                |            |                                 |                               |                      |
| Watsonville to Rob Roy Junction Airport Boulevard Feeder                                 | 10", 16"<br>6"                 | 400<br>400 | 400<br>400                      | 577<br>400                    | 400<br>400           |
| <b>COAST VALLEYS DIVISION</b>  |                                |            |                                 |                               |                      |
| *Monterey #1 - Harkins Road Meter & Mixer Station to Fig-Frank Streets Regulator Station | 8", 12"                        | 313        | 313                             | 400                           | 400                  |
| *Monterey #2 - Fort Ord to Fig-Frank Streets Regulator Station                           | 8", 10",<br>12", 16"           | 313        | 313                             | 400                           | 400                  |
| *DFM-3 Harkins Road Meter and Mixer Station to MP 2.45                                   | 8", 10"                        | 313        | 313                             | 500                           | 500                  |
| *DFM-3 MP 2.45 to MP 3.50  | 8"                             | 313        | 313                             | 500                           | 500                  |
| *DFM-3 MP 3.50 to California Street Regulator Station                                    | 8"                             | 313        | 313                             | 500                           | 500                  |
| *DFM-4 Monterey V-18.65 to Carmel V-2.13 (Aquajito Road Regulator Station)               | 8", 10"                        | 313        | 313                             | 400                           | 400                  |
| *DFM-5 Hunter Road 70 Pajaro Street (MP 0.00 to MP 1.09)                                 | 8"                             | 313        | 313                             | 500                           | 500                  |
| DFM-6 Espinosa Road Main from 301-B, V-3.40  | 6"                             | 408        | 500                             | 500                           | 500                  |
| *DFM-7 Union Carbide Main from 187, MP 17.42   | 3"                             | 313        | 313                             | 720                           | 720                  |
| DFM-8 Paradise Road to Meridian Road Main  | 4", 6"                         | 500        | 500                             | 500                           | 500                  |
| <b>SAN JOSE DIVISION</b>   |                                |            |                                 |                               |                      |
| Milpitas Terminal to PLS #7, King Road, 20" Feeder                                       | 16", 20",<br>24", 30"          | 200        | 200                             | 275                           | 400                  |
| <b>REDWOOD REGION</b>  |                                |            |                                 |                               |                      |
| <b>SANTA ROSA DIVISION</b>   |                                |            |                                 |                               |                      |
| Cotati Feeder  | 8"                             | 450        | 500                             | 675                           | 675                  |
| 6" Sonoma Tap Line   | 6"                             | 450        | 500                             | 675                           | 675                  |

LINES OPERATING AT OR OVER 20% SWS

SHEET 22 OF 27 SHEETS

P & E CO.

DRAWING NUMBER  
086868

REV.  
8

| Location   | Nominal<br>Pipe<br>Diameter<br>(Inches) | MOP<br>(psig) | Min MAOP<br>for any<br>Segment<br>(psig) | Min DP<br>for any<br>Segment<br>(psig) | Future<br>Design<br>(psig) |
|--|---|---------------|--|--|----------------------------|
| <b>REDWOOD REGION (Cont'd)</b>                                 |   |               |  |  |                            |
| <b>VALLEJO-NAPA DIVISION</b>                                   |   |               |  |  |                            |
| 26" Line 21 (V-16.16) to Pine Street Meter Station,<br>V-3.04  | 8"                                      | 450           | 500                                      | 675                                    | 675                        |
| 26" Line 21 (V-16.16) to Kilburn Regulator Station             | 10"                                     | 450           | 500                                      | 675                                    | 675                        |
| Kilburn Regulator Station to T-14.01, No. of Yountville        | 8", 10"                                 | 450           | 500                                      | 675                                    | 675                        |
| T-14.01 to Inglewood Lane M.P. 18.96                           | 10"                                     | 150           | 500                                      | 675                                    | 675                        |
| Tap to Kaiser Steel East of Napa River                         | 4"                                      | 450           | 500                                      | 675                                    | 675                        |
| <b>SACRAMENTO VALLEY REGION</b>                                |   |               |  |  |                            |
| <b>COLGATE DIVISION</b>  |   |               |  |  |                            |
| Yuba City Underground Holder to Market Street<br>Regulator Pit | 6", 8"                                  | 250           | 250                                      | 400                                    | 400                        |
| Tap to Schohr Ranch  | 6"                                      | 250           | 250                                      | 720                                    | 720                        |
| DFM-1 Tap to Strain Ranch Dryer                                | 4"                                      | 800           | 800                                      | 800                                    | 800                        |
| <u>Feather River Boulevard</u>                                 | 4"                                      | 600           | 600                                      | 720                                    | 720                        |
| Naas Foods Feeder, Williams                                    | 4"                                      | 800           | 800                                      | 800                                    | 800                        |
| Nicolaus Road, Lincoln   | 4"                                      | 100           | 600                                      | 600                                    | 600                        |
| <u>District 10 DFM, Marysville</u>                             | 8"                                      | 400           | 400                                      | 720                                    | 720                        |
| <u>Tap from L-50 to Biggs Reg Station</u>                      | 4"                                      | 250           | 720                                      | 720                                    | 720                        |
| <b>DE SABLE DIVISION</b>                                       |   |               |  |  |                            |
| DFM-1 Butte College Tap  | 3", 4"                                  | 400           | 720                                      | 720                                    | 720                        |
| Orland Tap from L-177 to Second Stage Regulator                | 6"                                      | 490           | 490                                      | 720                                    | 720                        |
| Paradise Primary Reg To Secondary Reg                          | 8"                                      | 400           | 720                                      | 720                                    | 720                        |
| <u>Hamilton City Tap to Verschagin</u>                         | 4", 6"                                  | 720           | 720                                      | 720                                    | 720                        |
| Holly Sugar Tap  | 4", 6"                                  | 575           | 720                                      | 720                                    | 720                        |
| <b>DRUM DIVISION</b>   |   |               |  |  |                            |
| Diamond Oaks Feeder  | 6"                                      | 500           | 500                                      | 500                                    | 600                        |

LINES OPERATING AT OR OVER 20% SMS

SHEET 23 OF 27 SHEETS

P O A E CO.

DRAWING NUMBER  
086868

REV  
8

Location

Nominal  
Pipe  
Diameter  
(Inches)

MOP  
(psig)

Min MAOP  
for any  
Segment  
(psig)

Min DP  
for any  
Segment  
(psig)

Future  
Design  
(psig)

**SACRAMENTO VALLEY REGION (Cont'd)**

**SACRAMENTO DIVISION**

|   |                  |     |     |     |     |
|---|------------------|-----|-----|-----|-----|
| 16" L-108 to Campbell Soup Co.  | 16"              | 412 | 412 | 500 | 656 |
| 16" L-108 to Galt Primary Regulator                                   | 4"               | 490 | 490 | 500 | 720 |
| *DFM-1 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",<br>16" | 412 | 412 | 500 | 656 |
| L-108 to Florin Road Primary  | 6", 10"          | 412 | 412 | 500 | 656 |
| DFM-2 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 |
| 119-Elm and Traction Avenue Regulator Station to T-0.93               | 12"              | 180 | 500 | 500 | 600 |

**SHASTA DIVISION**

|   |        |     |     |     |     |
|---|--------|-----|-----|-----|-----|
| Simpson Paper Mill Feeder                   | 6"     | 500 | 600 | 720 | 720 |
| Enterprise Town Feeder                      | 4", 6" | 500 | 600 | 720 | 720 |
| Calaveras Cement Company Feeder             | 8"     | 500 | 600 | 720 | 720 |
| Red Bluff District Tap (22)                 | 2"     | 911 | 911 | 911 | 911 |
| Burney Tap                                  | 2"     | 911 | 911 | 960 | 911 |
| Sierra Pacific Lumber (Burnery) Tap         | 2"     | 911 | 911 | 960 | 911 |
| Redding Feeder                              | 6"     | 500 | 600 | 720 | 720 |
| Clear Creek Road Feeder                     | 4"     | 500 | 720 | 720 | 720 |
| Louisiana Pacific Lumber Mill S/O Red Bluff | 2"     | 911 | 911 | 960 | 911 |
| McArthur-Fall River Feeder                  | 2"     | 525 | 911 | 911 | 911 |
| Gerber Feeder                               | 2"     | 450 | 911 | 911 | 911 |

(21) U.S. Plywood Plant Feeder has been abandoned.  
 (22) Formerly Line 309.

LINES OPERATING AT OR OVER 20% SVMS

SHEET 24 OF 27 SHEETS

P. G. & CO.

DRAWING NUMBER  
086868

REV.  
8

| Location   | Nominal Pipe Diameter (Inches) | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design (psig) |
|--|--------------------------------|------------|---------------------------------|-------------------------------|----------------------|
| <b>SACRAMENTO VALLEY REGION (Cont'd)</b>                         |                                |            |                                 |                               |                      |
| <b><u>VACA VALLEY DIVISION - VACAVILLE SERVICE TERRITORY</u></b> |                                |            |                                 |                               |                      |
| 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",<br>6"                  | 400        | 400                             | 400                           | 400                  |
| Vacaville - SNRR to Elmira Road                                  | 3", 6"                         | 400        | 400                             | 400                           | 720                  |
| Vacaville - Hawkins Road, Nut Tree Road to Lewis Road            | 8"                             | 400        | 400                             | 400                           | 400                  |
| Vacaville - Hawkins Road, Nut Tree Road to Lewis Road            | 6"                             | 975        | 975                             | 975                           | 975                  |
| 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 - Tremont Tap to Dixon Meter Station          | 6"                             | 720        | 750                             | 800                           | 800                  |
| Illinois Street 10" Feeder                                       | 6", 10"                        | 650        | 675                             | 740                           | 720                  |
| <b><u>VACA VALLEY DIVISION - WOODLAND SERVICE TERRITORY</u></b>  |                                |            |                                 |                               |                      |
| Gibson Feeder Main   | 6"                             | 500        | 500                             | 500                           | 800                  |
| Fairfield - Knolls Feeder  | 4"                             | 500        | 500                             | 500                           | 800                  |
| Hunts Feeder Main  | 6"                             | 500        | 500                             | 500                           | 800                  |
| <b><u>SAN JOAQUIN VALLEY REGION</u></b>                          |                                |            |                                 |                               |                      |
| <b><u>FRESNO/KINGS DIVISION</u></b>                              |                                |            |                                 |                               |                      |
| DFM-1 San Joaquin to Tranquility                                 | 3"                             | 650        | 800                             | 900                           | 900                  |
| DFM-5 Ashland Avenue Tap to River Rock Products                  | 4", 6"                         | 400        | 593                             | 720                           | 720                  |
| DFM-6 SIM CAL Chemical Co. Feeder                                | 6"                             | 650        | 650                             | 800                           | 720                  |
| DFM-7 Adams & Elm Meter & Reg Sta to So. Cal. Gas Co.            | 8"                             | 263        | 263                             | 400                           | 400                  |

LINES OPERATING AT OR OVER 20% SMYS

SHEET 25 OF 27 SHEETS

P. G. & CO.

DRAWING NUMBER  
086868

REV.  
8

| Location  | Nominal Pipe Diameter (Inches) | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design (psig) |
|---|--------------------------------|------------|---------------------------------|-------------------------------|----------------------|
| <b>SAN JOAQUIN VALLEY REGION (Cont'd)</b>                                   |                                |            |                                 |                               |                      |
| <b>FRESNO/KINGS DIVISION (Cont'd)</b>                                       |                                |            |                                 |                               |                      |
| DFM-16 Coalinga Feeder - Amador Avenue Sta. to Oil City Road Sta.           | 10"                            | 498        | 890                             | 890                           | 890                  |
| <u>DFM-16 Coalinga Feeder - Oil City Road Sta. to Coalinga</u>              | 4", 6"                         | 498        | 720                             | 720                           | 720                  |
| Clovis Feeder Main  | 8", 10"                        |            |                                 |                               |                      |
| Peach and Central Feeder  | 6", 12"                        | 650        | 650                             | 720                           | 720                  |
| Kerman Primary Feeder   | 6"                             | 650        | 720                             | 720                           | 720                  |
|   | 4"                             | 500        | 500                             | 720                           | 720                  |
| <b>KERN DIVISION</b>  |                                |            |                                 |                               |                      |
| DFM-8 US Borax & Chem. Co. Reg Sta to US Borax & Chem. Co. Master Meter Sta | 4", 6"                         | 490        | 490                             | 720                           | 720                  |
| <b>STANISLAUS DIVISION</b>  |                                |            |                                 |                               |                      |
| <u>Ripon-Modesto Feeder, Stanislaus River to Modesto</u>                    | 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                             | 720                           | 720                  |
| Carpenter Road Feeder (Modesto)   | 4", 12"                        | 408        | 720                             | 720                           | 720                  |
| Pauline Avenue Feeder   | 4", 6"                         | 408        | 408                             | 720                           | 720                  |
| Turlock Irrigation District Peaking Power Plant                             | 6"                             | 500        | 890                             | 890                           | 890                  |
| Claus Road Feeder   | 6", 8"                         | 408        | 720                             | 720                           | 720                  |
| <b>STOCKTON DIVISION</b>  |                                |            |                                 |                               |                      |
| Valley Tomato Feeder  | 8"                             | 412        | 500                             | 720                           | 720                  |
| Eight Mile Road Feeder  | 4", 8"                         | 412        | 412                             | 720                           | 720                  |
| Turner Road Feeder A  | 8"                             | 300        | 720                             | 720                           | 720                  |
| Turner Road Feeder B  | 4", 6"                         | 300        | 300                             | 720                           | 720                  |
| McArthur Road Feeder  | 4"                             | 295        | 295                             | 400                           | 720                  |
| Louise Avenue Feeder  | 8"                             | 408        | 408                             | 720                           | 720                  |

LINES OPERATING AT OR OVER 20% SWS

| Location | Nominal Pipe Diameter (Inches) | MOP (psig) | Min MAOP for any Segment (psig) | Min DP for any Segment (psig) | Future Design (psig) |
|----------|--------------------------------|------------|---------------------------------|-------------------------------|----------------------|
|----------|--------------------------------|------------|---------------------------------|-------------------------------|----------------------|

**SAN JOAQUIN VALLEY REGION (Cont'd)**

**STOCKTON DIVISION (Cont'd)**

|   |         |     |     |     |     |
|---|---------|-----|-----|-----|-----|
| <u>Ripon-Modesto Feeder, L108 to Stanislaus River</u> | 8", 12" | 408 | 408 | 720 | 720 |
| <u>East Stockton Feeder (Miner Avenue)</u>            | 12"     | 408 | 720 | 720 | 720 |
| <u>French Camp Feeder</u>                             | 8"      | 412 | 412 | 720 | 720 |
| <u>Pinchot Feeder (Ragu Foods)</u>                    | 6"      | 412 | 412 | 720 | 720 |
| <u>Yosemite Avenue Feeder (Airport to Pacific)</u>    | 8"      | 412 | 412 | 720 | 720 |
|   | 8"      | 408 | 408 | 720 | 720 |

**YOSEMITE DIVISION**

|  |        |     |     |     |     |
|--|--------|-----|-----|-----|-----|
| <u>DFM-4 Cressey Way Tap to Rogers Bros Packing</u>      | 4", 6" | 400 | 400 | 720 | 720 |
| <u>DFM-10 Red Top Cogeneration Facility Service Line</u> | 4"     | 500 | 625 | 720 | 720 |
| <u>Yosemite Avenue Feeder</u>                            | 6"     | 400 | 400 | 720 | 720 |
| <u>Snelling Highway Feeder</u>                           | 6"     | 400 | 400 | 400 | 720 |
| <u>Vinewood Avenue Feeder</u>                            | 4"     | 400 | 720 | 720 | 720 |
| <u>Winton Avenue Feeder</u>                              | 6"     | 400 | 720 | 720 | 720 |
| <u>Mendota Biomass Feeder</u>                            | 4"     | 890 | 890 | 890 | 890 |

SHEET 26 OF 27 SHEETS

P O R CO.

DRAWING NUMBER  
086868

REV.  
8

LINES OPERATING AT OR OVER 20% SMS

P O A E CO.  
SHEET 27 OF 27 SHEETS

DRAWING NUMBER  
086868

REV  
8

| Location                         | Nominal<br>Pipe<br>Length<br>(Feet) | Nominal<br>Diameter<br>(Inches) | MOP<br>(psig) | MAOP<br>(psig) | Design<br>Press.<br>(psig) | Future<br>Design<br>Press.<br>(psig) |
|----------------------------------|-------------------------------------|---------------------------------|---------------|----------------|----------------------------|--------------------------------------|
| <u>MISSION TRAIL REGION</u>      |                                     |                                 |               |                |                            |                                      |
| <u>COAST DIVISION</u>            |                                     |                                 |               |                |                            |                                      |
| Santa Cruz                       | 7,221                               | 30"                             | 618           | 618            | 618                        | 660                                  |
|                                  | 4,838                               | 34"                             | 618           | 618            | 618                        | 660                                  |
| <u>REDWOOD REGION</u>            |                                     |                                 |               |                |                            |                                      |
| <u>MARIN DIVISION</u>            |                                     |                                 |               |                |                            |                                      |
| San Rafael                       | 37,392                              | 30"                             | 650           | 650            | 690                        | 690                                  |
| <u>SACRAMENTO VALLEY REGION</u>  |                                     |                                 |               |                |                            |                                      |
| <u>COLGATE DIVISION</u>          |                                     |                                 |               |                |                            |                                      |
| Yuba City                        | 24,784                              | 34"                             | 525           | 525            | 550                        | 550                                  |
| <u>SACRAMENTO DIVISION</u>       |                                     |                                 |               |                |                            |                                      |
| Sacramento                       | 78,452                              | 34"                             | 500           | 500            | 500                        | 500                                  |
|                                  | 3,984                               | 36"                             | 500           | 500            | 500                        | 500                                  |
|                                  | 10,956                              | 42"                             | 500           | 500            | 500                        | 500                                  |
| <u>SAN JOAQUIN VALLEY REGION</u> |                                     |                                 |               |                |                            |                                      |
| <u>FRESNO/KINGS DIVISION</u>     |                                     |                                 |               |                |                            |                                      |
| Fresno                           | 43,722                              | 30"                             | 690           | 690            | 690                        | 690                                  |