

**SUBJECT: Setpoints, Overpressure Protection Devices**

**Objective**

This Standard sets forth requirements for establishing, revising, and documenting the setpoints of overpressure protection devices protecting California Gas Transmission (CGT) pipeline facilities.

**Scope**

These requirements apply to setpoints of all devices utilized in providing overpressure protection of CGT gas transmission lines. This Standard does not apply to overpressure protection of auxiliary systems (e.g., lube oil, air, and hydraulic systems, natural gas operated control systems, etc.), or to gas field collection relief valves which act as the primary automatic pressure control into a gathering/transmission line.

**Rescission**

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

**Originator**

Technical Committee 21, Station Equipment

**Business Risk**

Non-compliance with this Standard can lead to unsafe operation of a pipeline system, jeopardizing employee and/or public safety and system reliability. Non-compliance with applicable federal and state regulations may subject PG&E to fines.

**Responsibility for Implementation**

Manager, Gas System Maintenance & Technical Support, and DCS OM&C Managers (or their designated representatives) are responsible for ensuring compliance with this Standard.

**Attachments**

Attachment 1, Form No. F4125.1, "Request to Revise Setpoint on Overpressure Protection Device for Transmission Lines"

**Related Policy**

GTS Standard S 4125, "Maximum Allowable Operating Pressure, Requirements for Distribution Systems and Transmission and Gathering Lines"  
CGT Engineering Guideline EG 4125.2, "Establishing Setpoints on Overpressure Protection Devices"  
CGT Standard RP 4432, "Station Maintenance Requirements" (under development)  
CGT Standard S 4433, "Gas Pressure Relief Devices - Responsibility for Capacity Verification"  
PG&E Drawing No. 183018, "Overpressure Protection Device Maximum Settings"  
*GSM Clearance Training Manual*  
49CFR Parts 192.195, 192.199, & 192.201  
GS&S H-70, "Pressure Relief Devices"



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**Contact for Further Information**

[Redacted]  
System Integrity, GSM&TS  
[Redacted]

**Approvals and Authorizations**

[Redacted] **11/15/98**

[Redacted] Manager, GSM&TS Date

**W. R. Mazotti** **11/18/98**

W. R. Mazotti, Vice President, Gas and Electric Transmission Date

**Definitions**

Transmission Line as defined in this Standard is any pipeline that operates over 60 psig and is not a gathering line. Transmission lines are grouped as backbone transmission, local transmission or Distribution Feeder Main (DFM).

- Backbone transmission lines transport gas over long distances from the interconnection points with gathering systems, interstate pipelines, and storage fields.
- Local transmission lines interconnect with backbone transmission or sources of supply.
- DFMs branch off backbone or local transmission lines and transport gas to large volume customers, or to Distribution Systems which operate at pressures at or below 60 psig.

Overpressure Protection (OPP) Device is pressure relieving or pressure limiting apparatus installed to protect a pipeline from exceeding its maximum Code-allowable overpressure, as described in Subpart D of 49 CFR 192, in the event of a pressure control failure.

Types of OPP devices include:

- relief valves
- monitor valves
- security valves

**Determining Setpoints**

Each overpressure protection (OPP) device shall be set to ensure that in the event of a pressure control failure, the pressure in a transmission system shall not exceed: 1) the maximum allowable operating pressure plus 10 percent, or 2) the pressure that produces a hoop stress of 75 percent of SMYS, **whichever is lower**, under any possible operating condition.

Setpoints for OPP devices shall be determined according to Engineering Guideline EG 4125.2, "Establishing Setpoints On Overpressure Protection Devices." The setpoint shall not exceed values listed in PG&E Drawing No. 183018, unless prior approval is obtained. (See "Drawing No.183018, "Overpressure Protection Device Maximum Settings"" section below.)

**Revising Setpoints**

Whenever an OPP device setpoint is required to be revised to a value higher than that shown on Drawing No. 183018, the foreman, or designate, shall submit a Request to Revise Setpoint form (F4125.1) to the responsible GSM&TS Pipeline or Facility Engineer.

The responsible GSM&TS Pipeline or Facility Engineer shall review the Request and forward a recommendation to their Director for approval. The appropriate Director of Pipeline or Station Engineering shall evaluate and approve (or disapprove) the request.

**Annual  
Verification/Test**

Upon approval of the Request form, the Director approving the form shall forward the document to System Integrity of GSM&TS for distribution. System Integrity shall send copies of the completed forms to System Gas Control, both Gas Control Centers, Directors of GSM&TS Pipeline and Station Engineering, and to the requester.

Form F4125.1 is not required for a temporary change to the OPP setpoint due to maintenance or construction activities. (However, the limitations listed in the first paragraph under *Determining Setpoints* must still be complied with.) Use the GSM&TS Clearance Procedure Process instead.

As required by CGT Standard RP-4432, "Station Maintenance Requirements," the setpoints of the OPP device shall be field-verified and tested annually.

**Drawing No.183018,  
Overpressure  
Protection Device  
Maximum Settings**

Maximum setpoints of overpressure protection devices shall be documented on PG&E Drawing No. 183018, "Overpressure Protection Device Maximum Settings."

The Foreman or Operating Supervisor is responsible for ensuring the setpoints of the OPP devices in facilities located within their assigned area do not exceed the maximum settings shown of PG&E Drawing No. 183018.

The Director of System Integrity shall be responsible for issuing/distributing, PG&E Drawing No. 183018 annually, on or before March 15<sup>th</sup> to reflect setpoint changes or additions that have been submitted for posting.

The Director of Station Engineering of GSM&TS is responsible for approving the annual updates to PG&E Drawing No. 183018.

The latest revision of Drawing No. 183018 shall be kept on the *GS Information System*.

**Records**

All completed forms requesting OPP device setpoint revision (Form No. F4125.1) shall be retained for the life of the facilities by the Records Section of GSM&TS in Walnut Creek. These forms shall be kept in the appropriate Station Files.

**REQUEST TO REVISE SETPOINT ON OVERPRESSURE PROTECTION DEVICE  
FOR TRANSMISSION LINES**

**Instructions: Complete Parts I, II and III and forward this form and any required attachments to: the responsible GSM&TS Pipeline or Facility Engineer, 375 N. Wiget Lane, Walnut Creek.**

**PART I REQUESTER INFORMATION**

|               |           |                       |  |
|---------------|-----------|-----------------------|--|
| Request Date: |           | Date Approval Needed: |  |
| Requester:    | Location: | Telephone:            |  |

**PART II MONITOR VALVE / RELIEF DESCRIPTION**

|                            |                                |
|----------------------------|--------------------------------|
| Valve No. (or description) | Station Name                   |
| Valve Function:            |                                |
| Current Setpoint:          | Operating Diagram No.          |
| Proposed Setpoint:         | MOP of system being protected: |

**PART III REASON FOR REVISING SETPOINT**

|  |  |
|--|--|
|  | Changes to the MOP/MAOP of downstream system |
|  | Operational problems / other (describe):     |
|  |  |
|  |  |

**PART IV REVIEW/APPROVALS (Review shall be performed by the Facility or Pipeline Engineer assigned responsibility for the station. Approval shall be performed by the Engineer's Director.)**

| Setpoint Change Reviewed/Approved by:  | Name | Date |
|--|------|------|
| GSM&TS Pipeline/Facility Engineer (review)   |      |      |
| GSM&TS Pipeline/Station Director (approval)  |      |      |
| <b>Upon approval, forward this form to Director, System Integrity, 375 N. Wiget Lane, Walnut Creek, for Distribution</b> |      |      |

Distribution:

Original - GSM&TS Records - Keep in Station File

Copies:      System Gas Control                      Director, Pipeline Engineering                      Director, System Integrity  
                     Gas Control Center                              Director, Station Engineering                      Local Office (Requester)