Number: EG 4124

Revision: 2

Issuing Department: GAS SYSTEM MAINTENANCE AND TECHNICAL SUPPORT
Manager:

Effective Date: 01 Jan. 1999 Review Date: 01 Jan. 2001

SUBJECT: Emergency Pre-tested Transmission Pipe

Objective

This Engineering Guideline describes PG&E's Emergency Transmission Pipe Program. It specifies material, testing, marking, documentation, handling and storage, minimum/maximum inventory requirements for Emergency Stock Pipe, and the procedures for obtaining and using the pipe.

Scope

The Emergency Transmission Pipe Program includes pre-tested pipe held in inventory for emergency situations affecting PG&E's transmission lines and gathering lines (MAOP over 60 psig). Emergency situations are those where the pipeline must be placed back into service as soon as possible and time does not permit a pre-(or post)-installation strength test.

Originator

Emergency Transmission Pipe Team

Business Risk

The service reliability of PG&E's pipelines could be jeopardized.

Responsibility for Implementation Manager, Gas System Maintenance and Technical Support

Contact for Further Information

Pipeline Engineering
Gas System Maintenance and Technical Support

System Integrity

Gas System Maintenance and Technical Support

Approvals and Authorizations

Manager, Gas System Maintenance and Technical Support

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EMERGENCY PIPE MATERIAL:

I, SPECIFICATIONS

All steel pipe shall be manufactured in accordance with the latest revision of the PG&E specifications listed below.

- CGT Engineering Guideline, EG 4114. -- "Pipe Material Specification for Seamless Steel Pipe, Grade B".
- CGT Engineering Guideline, EG 4119, -- "Pipe Material Specification for DSAW Steel Pipe, Grades X-42 to X-60".
- CGT Engineering Guideline, EG 4120, -- "Pipe Material Specification for ERW Steel Pipe, Grade B to X-52".

IL COATING SPECIFICATIONS

All Emergency Stock Pipe shall be coated externally with Bar-Rust 235 in accordance with Gas Standard E-35.

III, TESTING

To qualify as pre-tested "Emergency Stock Pipe", all pipe shall be strength tested per PG&E's Gas Standard A-34 "Piping Design and Test Requirements", to a minimum pressure equal to 90% SMYS for a minimum duration of 4-hours. All test information shall be documented on PG&E's Strength Test Pressure Report (STPR) Form # 62-4921.

IV. MARKING

Emergency Stock Pipe shall be marked in accordance with the following specifications:

- Each piece of pipe shall have the word "EMERGENCY" painted every 72 inches along its entire length. The letters should fill approximately one quadrant of the pipe circumference in height. The paint should be highly visible against the pipe coating.
- Filling the quadrant directly below each word "EMERGENCY", shall be the following information:

"Pipe diameter, wall thickness, pipe grade, and specification" "A 7-digit alpha-numeric STPR number"

The 7-digit alpha-numeric STPR number is a unique number assigned by the GSM&TS Pipeline Engineering Section to each STPR of Emergency Stock Pipe. This number uniquely matches the pipe with the correct STPR and test chart. This number alone will allow anyone to access the test information for a particular piece of pipe prior to use to ensure that it will meet the intended use.

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V. DOCUMENTATION:

All Emergency Stock Pipe shall have the following documentation:

- 1. Form 62-4921, Strength Test Pressure Report Completed with test pressure, date, and pipe specifications.
- Emergency Pipe Test Information Form Gas Standard Λ-34, Appendix H.
- Copy of the circular Test Pressure Recording Gauge Chart.

VI, HANDLING AND STORAGE:

- All Emergency Stock Pipe shall be handled, stored and transported in accordance with the latest revision of CGT Recommended Practice RP4113, "Pipe, Bare and Coated: Handling, Storage and Transporting."
- 2. All Emergency Stock Pipe shall be stored at the Decoto, Fresno and Marysville Materials Facilities.

VII. MINIMUM/MAXIMUM INVENTORY:

The required minimum/maximum inventory of Emergency Stock Pipe at each Materials Facility is given in Table I. This Table represents pipe that is planned to be stored at each site or for new pipe to be ordered.

OPERATING PROCEDURES:

- 1. GSM&TS Pipeline Engineering Section will staff a 24-hour on-eall Pipeline Engineer to operate the "Gas Emergency Material System".
- 2. When Emergency Stock Pipe is required, the supervisor-in-charge will call the respective area Pipeline Engineer during normal hours or the on-call Pipeline Engineer. After selecting the proper pipe from the "Gas Emergency Material System", the Pipeline Engineer will call the Materials Department on-call supervisor to arrange delivery of the pipe from the appropriate facility. The Materials Department will deliver the pipe to the site within 4 hours of the call. The Pipeline Engineer will immediately send, by fax or LAN, the STPR number to the supervisor-in-charge. The Pipeline Engineer will forward copies of the required documents (See Paragraph V. DOCUMENTATION) within 24 hours. The supervisor-in-charge is responsible for verifying the STPR number on the pipe before using it and retaining the required documentation.
- After the Emergency Stock Pipe is used the Pipeline Engineer shall follow-up with the supervisor in charge to generate a material requisition. The Materials Department will deduct the footage of pipe shown on the material requisition from the Emergency Stock

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Pipe inventory and notify GSM&TS to update the "Gas Emergency Material System" database. The Emergency Stock Pipe inventory shall be included in the Materials Department's monthly report for each Materials Facility.

RESPONSIBILITIES:

- GSM&TS Pipeline Engineering Section is responsible for
 - establishing and operating the on-line "Gas Emergency Material System" and maintaining the STPR database.
 - determining the required minimum/maximum inventory of Emergency Stock Pipe and reviewing the adequacy of inventory,
 - ordering and testing the Emergency Stock Pipe when the minimum inventory is reached, and
 - auditing the emergency pipe Materials Facilities annually.
- 2. The Materials Department is responsible for auditing and maintaining the minimum/maximum levels of Emergency Stock Pipe inventory, updating the Materials Department's monthly report, and arranging delivery of pipe to the field within 4 hours of the request from the Pipeline Engineer.
- 3. The staff at the Materials Facilities are responsible for maintaining the inventory and inspecting the pipe and coating annually.

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Table I MINIMUM/MAXIMUM INVENTORY

OD	Wall	GRADE	WELD	MARYSVILLI	DECOTO	FRESNO
(in)	Thickness (in)		TYPE	(ft)	(ft)	(ft)
2.375	0.154	GR B	SMLS	80/120	80/200	80/120
3.5	0.216	GR B	SMLS	80/120	80/200	80/120
4.5	0.237	GR B	SMLS	80/120	80/200	80/120
4.5	0.337	GR B	SMLS	O	80/200	0
6.625	0.280	GR B	SMLS	80/120	80/200	80/120
6.625	0.432	GR B	SMLS	Û	80/200	0
8.625	0.219	X-42	ERW	80/120	80/200	80/120
8.625	0.322	GR B	SMLS	80/120	80/200	80/120
8.625	0.500	X-42	SMLS	0	80/200	0
10.75	0.250	X-42	ERW	80/120	80/200	80/120
10.75	0.365	GR B	SMLS	80/120	80/200	80/120
10.75	0.594	X-52	SMLS	0	80/200	0
12.75	0.375	GR B	SMLS	80/120	80/200	80/120
12.75	0.375	X-42	ERW	80/120	80/200	80/120
12.75	0.500	GR B	SMLS	0	80/120	80/120
12.75	0.688	X-42	SMLS	0	80/200	0
14	0.375	GR B	SMLS	0	80/200	0
16	0,312	X-52	ERW	0	80/300	0
16	0.375	GR B	SMLS	0	80/300	0
16	0.500	X-60	ERW	0	80/200	0
16	0.750	X-52	SMLS	0	80/200	0
18	0.312	X-52	DSAW	Ü	80/300	0
18	0.500	X-60	DSAW	0	80/200	0
20	0.375	X-52	DSAW	0	80/300	0
20	0.500	X-52	DSAW	0	80/300	0
20	0.720	X-60	DSAW	0	80/200	0
22	0.500	X-52	DSAW	0	80/300	0
22	0.792	X-60	DSAW	0	80/200	0
24	0.375	X-52	DSAW	0	80/300	0
24	0.500	X-60	DSAW	0	80/300	0
26	0.500	X-60	DSAW	0	80/300	0
30	0.500	X-60	DSAW	0	80/300	0
32	0.500	X-60	DSAW	0	80/300	0
34	0.375	X-60	DSAW	0	80/300	0
34	0.562	X-60	DSAW	Ü	80/300	0

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Table I MINIMUM/MAXIMUM INVENTORY (Cont.)

OD	Wall	GRADE	WELD	MARYSVILLI	DECOTO	FRESNO
(in)	Thickness (in)		TYPE	(ft)	(ft)	(ft)
36	0.576	X-60	DSAW	0	80/300	0
36	0.687	X-60	DSAW	0	80/300	0
42	0.407	X-70	DSAW	0	80/300	0
42	0.586	X-70	DSAW	0	80/300	0
42	0.750	X-70	DSAW	0	80/300	0