

PG and E**FOR INTRA - COMPANY USES**

From Division or Department **GAS DISTRIBUTION**
 To Division or Department
 FILE NO. **460.2**
 RE: LETTER OF
 SUBJECT **Revised Standard Practice 460.2-1
 Patrolling, Pipelines and Mains**

July 25, 1984

DIVISION GAS SUPERINTENDENTS:


Attached is revised Standard Practice 460.2-1, Patrolling Pipelines and Mains. The only revision is in paragraph 9.a., whereby the required patrols may be performed at any time within the scheduled month.

Audits of patrol records have revealed that in some instances the data required by paragraphs 6 and 10 of the Standard Practice are not being adequately recorded. The most frequent omissions are as follows:

- (1) Boxes in the "Pipeline Patrol and Work Report" are checked as requiring further action, with no details given regarding action taken. Follow-up action should always be recorded.
- (2) Patrol dates are sometimes given as only one day when it is evident that the patrol must have been performed over a span of several days. If a patrol report covers more than one day, the time span should be reported.
- (3) Supervisory review is not indicated.
- (4) The roster of facilities to be patrolled is not maintained.

Please review the revised standard and with personnel responsible for maintaining patrol records to ensure that they are aware of the requirements of this Standard Practice.


 NORMAN L. BRYAN


 cc: HMMcKinley
 Managers, Gas Operations
 Division Managers

Attachment

STANDARD PRACTICESTANDARD PRACTICE NO. 460.2-1EXECUTIVE OFFICE OR DIVISION GAS OPERATIONSPAGE NO. 1 EFFECTIVE 4-2-75ISSUING DEPARTMENT GAS DISTRIBUTIONREPLACING
PAGE NO. 1 EFFECTIVE 2-1-68**SUBJECT:**

PATROLLING: PIPELINES AND MAINS

PURPOSE

- *1. To establish a uniform procedure for patrolling of Company gas transmission pipelines, gathering lines and selected distribution mains for the purpose of observing conditions on and adjacent to the right-of-way or route of the main that could be expected to affect the operation and safety of the lines or other Company facilities, such as indications of leakage, construction activity, ground movement, etc. The route of each gas transmission pipeline or selected distribution main shall be patrolled periodically in accordance with the current edition of California Public Utilities Commission G.O. 112.

REFERENCES

- *2. S.P. 460-1 Location Class Changes: "Pipeline and Mains"
 S.P. 460.2-2 "Physical Inspection: Pipelines, Mains, and Services"
 S.P. 460.21-4 "Gas Leakage, Routine Inspection Procedures"
 S.P. 462-1 "Removal and Control of Liquids, Pipeline and Mains"
 S.P. 463-5 "Installation of Pipeline Markers"
 S.P. 463.7 "Pipeline History File, Establishing and Maintaining"
 S.P. 463.8 "Maximum Operating Pressure of Pipelines and Main Operating at or above 20 Percent of SMYS"
 Gas Standard and Specifications Issued by Gas System Design Department
 Current Edition of California Public Utilities G.O. 112

RESCISSIONS

- *3. Previously issued instructions, oral or written, which may be contrary to this Standard Practice.

RESPONSIBILITY

4. The responsibility for performance of periodic patrolling shall rest with supervisors in the divisions and Pipe Line Operations Department, who direct the maintenance and operation of gas pipelines, mains, and appurtenances. Performance includes: setting specific scope and special considerations, assignment of frequency of patrolling, reviewing, and maintaining patrol records, and initiating action to correct conditions found during patrolling.

* Paragraph Revised
 ** Paragraph Added

(SEE OVER)

PACIFIC GAS AND ELECTRIC COMPANY

STANDARD PRACTICESTANDARD PRACTICE NO. 460.2-1EXECUTIVE OFFICE OR DIVISION GAS OPERATIONSPAGE NO. 2 EFFECTIVE 4-2-75ISSUING DEPARTMENT GAS DISTRIBUTIONREPLACING
PAGE NO. 2 EFFECTIVE 2-1-68**SUBJECT:**

PATROLLING: PIPELINES AND MAINS

SUPPLEMENT

5. Procedural details for periodic patrolling appear in the Supplement of this Standard Practice.

APPROVED


Vice President - Gas Operations

DISTRIBUTION

Division Managers
Pipe Line Operations
Safety, Health & Claims Department
District Managers
Division Gas Superintendents
Division Administrative Analysts or Equivalent
District Gas Superintendents or Equivalent
Director, Organization Planning

ADDITIONAL COPIES

Additional copies of this Standard Practice or the Supplement may be obtained from Gas Operations, 77 Beale Street, San Francisco (PG&E Extension 1604).

* Paragraph Revised
** Paragraph Added

(SEE OVER)

Revision of Standard Practice 460.2-1:
Patrolling: Pipelines and Mains,
Effective January 1, 1983

The major differences between the old Standard Practice and the 1/1/83 revision are:

1. Revision contains a requirement for quarterly patrols for Class 3 and 4 locations and semi-annual for Class 1 and 2 (Paragraph 9. a.). Predecessor, by reference to General Order 112, required semi-annual patrols for Class 3 and 4 locations and annual patrols for Class 1 and 2 locations.
2. Old Standard Practice "recommended" monthly aerial patrols, which has become by custom a virtual requirement. Revision permits operating departments to establish appropriate frequencies, within the limitations noted in 1. above.
3. Revision requires in paragraph 8 (e) a review of patrolling procedures annually for all pipelines, and in paragraph 8 (d) semi-annually for railroad and highway crossings. The purpose of the review is to ensure that patrolling methods and frequencies are adequate.

These provisions have essentially the same purpose as old paragraph 9 - to ensure that patrol frequencies and methods are appropriate for all sections of pipeline in consideration of such changeable factors as class location, construction activity and use of land. While no documentation of this review is required, the divisions should be able to explain to an auditor how it is performed. A convenient method may be the combining of these reviews with the routine review and approval of patrol documents by the supervisor of patrols. See also 4. below.

4. A roster of the pipelines patrolled, and of those locations requiring special attention, must be maintained. This roster may also be used to accomplish the annual review of all pipelines for appropriate patrol methods and the semi-annual review of special locations, as required by paragraphs 8 (e) and 8 (d). GASFM may be a convenient method of maintaining this roster.

PROCEDURAL DETAILS FOR PERIODIC PATROLLING

FACILITIES COVERED BY THIS STANDARD PRACTICE

6. a. The following gas pipelines shall be patrolled in accordance with instructions contained in this Standard Practice:
 1. All gathering lines or collection lines taking gas from wells.
 2. All numbered transmission lines.
 3. All distribution lines operating at or over 20% SMYS. Those lines are listed in Standard Practice 463-8.
 4. Any distribution lines subject to abnormal movement or external loading which might cause leakage or failure.
- b. Divisions and the Pipeline Operations Department shall establish and maintain a roster of facilities required to be patrolled:
 1. All pipelines outlined in 6. a.
 2. All locations requiring special attention, including pipelines at highway or railroad crossings, or on bridges, or expansion joints in pipelines or in areas subject to atmospheric corrosion or to any other condition where routine patrols may be inadequate.

The roster shall contain the identity of the facility, method and frequency of patrol and any specific instructions. The GASFM program may be used in establishing and monitoring the roster.

POINTS TO OBSERVE

7. Personnel patrolling the pipelines shall be alert for and report the following, which are on or adjacent to the pipeline rights-of-way.
 - a. Landslides or threatened slides.
 - b. Erosion by streams, wave action, rain, etc.
 - c. Land subsidence that could affect the pipeline or main.
 - d. Construction or maintenance work being done by others along the pipeline or main.
 - e. Encroachments on the right-of-way by buildings or structures or construction of levees, roads, wells, etc., for which no prior permission has been granted by the Company.

All paragraphs revised.

- f. Evidence of gas leakage, as indicated by vegetation, bubbles in surface water, odor, etc.
- g. Needed repairs to facilities owned by Company, including fences, pipeline markers, exposed crossings, etc.
- h. Needed repairs to highway structures and other facilities not owned by Company where public safety is a factor.
- i. Presence of survey parties or other indications of possible future work that might jeopardize the pipeline or main, or effect a change in its class location as defined in General Order 112, Section 192.5.
- j. Any other factors affecting the operation or safety of the pipeline or main or other Company facilities such as slope erosion, blocked culverts, casing vents, and access road washouts.
- k. Evidence of atmospheric corrosion which indicates the need for repair and/or recoating.
- l. Access roads used by others occasionally, or in areas viewed by the general public, that may not be in a passable condition as established in accordance with existing agreements.
- m. Any activity which could create an unsightly condition in aesthetically sensitive areas.

METHODS OF PATROLLING

- 8. a. All patrols may be made on the ground or by aerial observation. Aerial patrols shall be supplemented by ground patrols whenever any of the conditions stated in paragraph 7 cannot adequately be observed by aerial patrol or when required by (d) below.
- b. Ground patrols may be performed in conjunction with other work, such as valve maintenance, drip clearance, gas meter inspection and chart changing, as long as the necessary functions of patrolling, including reports, are accomplished.
- c. Aerial patrols shall be coordinated with the Pipeline Operations Department.
- d. Highway and railroad crossings must be carefully monitored for leak indications. Each crossing surveyed by aerial patrol shall be reviewed at least semiannually to determine the effectiveness of aerial patrol in observing leak indications. Whenever aerial patrol is found to be inadequate, supplementary methods of observation for leaks shall be employed, including, where necessary, ground patrols and leak detectors.
- e. Each pipeline shall be reviewed at least annually to verify the adequacy of the patrol methods for every portion of the pipeline.

All paragraphs revised.

FREQUENCY OF PATROLLING

- *9. a. All pipelines covered by paragraph 6 of this Standard Practice shall be patrolled at intervals not to exceed the following:

Class 1 and 2 locations *6 months

Class 3 and 4 locations *3 months
and all mains covered by
paragraph 6 (a) (4)

*Patrols may be made at any time during the scheduled month.

- b. More frequent patrols and inspections shall be scheduled at the discretion of the Division or Pipeline Operations Department to ensure the continued safe, reliable operation of pipelines and to prevent encroachments on Company right-of-ways. When establishing the frequency for these patrols, consideration shall be given to such factors as weather, terrain, size of line, operating pressure, importance of line to system integrity, Class location, frequency of construction and/or earth moving activity, etc.
- c. Pipelines shall be patrolled as soon as possible after a heavy rain storm, earthquake, etc., in those areas where damage is likely to occur.

REPORTS

10. The following report forms shall be used for recording patrol activities:

62-4648 for ground patrols and supplementary
observations for leak indications, as
required by paragraph 8 (d)

11-038 for aerial patrols

The report shall be completed so that it indicates the date and area patrolled, conditions requiring correction, and any work done in conjunction with the patrol. In addition, the report shall record either the corrective action taken, or a reference to other documents recording the corrective action. Each report shall be signed or initialled by the patroller and by the reviewing supervisor. A copy of each report shall be retained for the life of each numbered gas transmission pipeline and for a minimum of three years for all other pipelines.

11. a. Any conditions found during the patrol, which require immediate attention and cannot be corrected by the patrol, shall be reported to a responsible supervisor as soon as possible.
- b. After follow-up is made on any unusual condition found by aerial patrol, a copy of the aerial patrol report with the findings are to be sent to the Manager, Pipeline Operations Department, who will forward it to the Aerial Patrol Contractor.

*Paragraph revised.

12. Evidence of construction activity or other signs of possible encroachments on right-of-way shall be immediately reported as follows:
 - a. Within Pipeline Operations' jurisdiction, to the Area Superintendent, who will in turn report it to the Division Land Supervisor.
 - b. Within division jurisdiction, to the Division Gas Superintendent who will in turn report it to the Division Land Supervisor.

All paragraphs revised.