

PACIFIC GAS AND ELECTRIC COMPANY
STANDARD PRACTICE

4191f STANDARD PRACTICE NO. 460.21-4

EXECUTIVE OFFICE OR DIVISION GAS OPERATIONS

PAGE NO. 1 EFFECTIVE 4/1/66

ISSUING DEPARTMENT GAS DISTRIBUTION

REPLACING
PAGE NO. 1-3 EFFECTIVE 7/1/58

SUBJECT:

GAS LEAKAGE, ROUTINE INSPECTION FOR

PURPOSE

1. To establish a uniform procedure for routine surveys of Company mains and services for the purpose of detecting and reporting leakage, and to maintain an adequate record of such surveys.

POLICY

- *2. Routine leakage surveys shall be conducted at regular intervals throughout the gas system. This is in keeping with the general policy of conducting investigations for leakage as often as required for safe and economical operation.

RESPONSIBILITY

- **3. The Division Gas Superintendent shall be responsible for the performance of routine surveys. Performance includes: preparation of route books, assignment of test frequency to the route books, scheduling tests, reviewing and maintaining survey records, and initiating action to repair leaks found by the surveys.

SUPPLEMENT

- **4. Procedural details for routine leak surveys appear in the supplement to this standard practice.

APPROVED: E. H. FISHER
Vice President - Gas Operations

DISTRIBUTION: Div. Managers
Div. Gas Superintendents
Div. Admin. Analysts or Equiv.
District Managers
District Gas Superintendents or Equiv.
Director, Procedures Analysis
Manager, Claims and Safety

Additional copies of this Standard Practice or the supplement may be obtained from Gas Operations, 245 Market Street, San Francisco (PG&E extension 1604).

* Paragraph Revised
** Paragraph Added

(SEE OVER)

PROCEDURAL DETAILS FOR ROUTINE LEAK SURVEYSDEFINITIONS

5. The following definitions shall apply to this Standard Practice.
- *a. A "place of public assembly" is a place where people gather in sizable groups and where the occupancy is transient, such as theaters, churches, auditoriums, etc.
 - *b. A "school" is a place where the occupancy is principally by children in the nursery (preschool) through high school grades. Colleges, business schools, etc., shall be classified as "places of public assembly."
 - *c. A "hospital" is a place where the occupancy is principally by incapacitated people.
 - **d. An "urban area" is an area where the number of buildings on either side of the main exceeds 10 per 1000 feet.
 - **e. A "rural area" is an area where the number of buildings is 10 or less per 1000 feet.

ROUTINE SURVEYS

6. The variety of conditions encountered in the Company's pipeline system precludes establishing a procedure that would apply to every situation. Divisions will be guided by the frequency and extent of testing, as herein outlined. While these will be found to be applicable in the majority of cases, there is still need for the exercise of good judgment in each local situation.

Frequency of Surveys

- a. Annually - Each year routine surveys shall be conducted where any one of these conditions exists:
- *(1) The surface over the main is paved to the building wall and the building frontages (one or more structures) exceed 150 feet.
 - ** (2) A main or service pipe is within 250 feet of a building at a school, hospital, or place of public assembly.
 - (3) The main has a poor leakage history.
 - (4) Unusually corrosive conditions exist.
 - *(5) The main is operated at more than 60 psi and is in an urban area.

* Paragraph Revised
** Paragraph Added

- *(6) Propane-air is distributed.
- ** (7) A pipeline carries unodorized gas.
- *b. Every five years - The balance of the distribution system should be surveyed for leakage as frequently as experience indicates it is necessary, but not less than once every five years.

Extent of Survey

- c. The extent of routine leak surveys shall be determined by divisions to suit local conditions.
- ** (1) Rural Areas - In rural areas the survey may be accomplished by the "vegetation method," by use of a combustible gas indicator or by a highly sensitive methane indicator (infrared or similar).
- (2) Urban Areas
 - *(a) In streets and paved ways, gas detector tests shall be made with approved instruments of existing openings including pavement cracks, manholes, catch basins, gas or water meter boxes, valve boxes, etc. When leakage is indicated, the basements and foundation walls of buildings fronting on the street shall immediately be tested at available openings, such as basement ventilators, doorways, pipe openings in the street wall, etc. If the meter set is located in the basement, it shall also be tested for leaks.
 - (b) In private property, careful inspection should be made of vegetation along the easement or right of way.
 - ** (c) At schools, hospitals, and places of public assembly:
 - i. Gas detector tests shall be made of the service from the main up to and including the riser.
 - ii. Gas detector tests shall be made over mains located within 250 feet of any building.
 - iii. Permanent test stations may be installed if there are no suitable existing openings, such as meter boxes, etc.

Special Reports

- *d. Certain leak conditions found by the tester require that he shall make a special report to his supervisor. The special reports should be made under these conditions:

* Paragraph Revised
** Paragraph Added

- (1) Immediate Report - Whenever the tester finds a large leak where he can hear or feel gas blowing or where the tests indicate gas in a basement or within two feet of a building.
- (2) Report at the end of the work day - Whenever the tester finds indications of gas in numerous locations in a block.
- (3) As soon as possible - Whenever the tester finds a leak that may require special attention.

ROUTE BOOKS AND TEST RECORDS

7. Suitable route books and test records shall be prepared and kept by the divisions.
 - a. The Test Area
 - *(1) Routine leak survey route books shall be prepared to define the areas to be tested. The route books shall be marked to indicate the established test frequency. Each route book shall contain an index map. Plat sheets may be used to indicate the areas to be tested.
 - ** (2) Special test route books or other alternate procedure shall be prepared for the annual tests required at schools, hospitals, and places of public assembly. Test records and locations of schools, hospitals and places of public assembly shall be cross referenced with the established route books.
 - *(3) Test record sheets for each block should show the location of each manhole and vault. For this purpose the form No. 62-6358, "Exhibit A - Gas Leakage Test Record, Streets and Paved Ways" is suggested.
 - *(4) Where the main is located on private property, the report form No. 62-4837, "Exhibit B - Gas Leakage Test Record, Easements and Rights of Way" is suggested for use wherever it is appropriate.
 - *(5) A file of routine leak survey route books shall be maintained in each District Office or Operating Headquarters.
 - *b. Recording the Tests - Each test and the type of instrument used shall be recorded on the test record form. Where leakage is indicated, the tests shall be recorded exactly as read on the test equipment. Mobile leak survey records shall be recorded in the appropriate route books. A page of tests with no leakage can be recorded as "all tests O.K." A test showing no leakage may be recorded as "O.K." or by a check "✓" mark.

* Paragraph Revised
 ** Paragraph Added

- c. Establishing Test Schedules - A schedule shall be established in each office where route books are kept to bring to the supervisor's attention the dates on which routine surveys become due.
- *d. Supervisor's Review and Action - When the routine leak survey of an area is completed, the route books for the area are to be returned to the supervisor. The supervisor shall review the survey results recorded in the route books and initiate the action that is necessary to repair leaks.

RETENTION OF TEST RECORDS

- *8. Records of leaks discovered, repairs made, and routine leak survey tests shall be retained as follows:
 - a. For mains operating at more than 60 psi the records shall be kept on file as long as that section of main involved remains in service plus six years.
 - b. For mains operating at less than 60 psi and not having an annual survey the records shall be kept for eleven years.
 - c. For mains requiring annual surveys the records shall be kept for at least six years.

ATTACHMENTS

Exhibit A (Form No. 62-6358)

Exhibit B (Form No. 62-4837)

* Paragraph Revised
** Paragraph Added

