

The Commonwealth of Massachusetts

REPORT

OF THE

DEPARTMENT OF PUBLIC UTILITIES
ON GAS SAFETY CODE

UNDER CHAPTER 74 OF THE RESOLVES OF 1953

DECEMBER, 1953

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The Commonwealth of Massachusetts

REPORT OF THE DEPARTMENT OF PUBLIC UTILITIES ON GAS SAFETY CODE.

DEPARTMENT OF PUBLIC UTILITIES,
STATE HOUSE, BOSTON, December 1, 1953.

To the Honorable Senate and House of Representatives in General Court assembled.

This report is submitted by the Department of Public Utilities in accordance with chapter 74 of the Acts and Resolves of 1953. Said resolve reads as follows:

Resolved, That the department of public utilities is hereby authorized and directed to undertake an immediate study of the gas service safety code adopted on November fourteenth, nineteen hundred and fifty-two by the public utilities commission of the state of New York, with a view to recommending to the general court such changes in the laws of the commonwealth as may be necessary to protect the health, safety and welfare of the citizens of the commonwealth.

Said department shall make recommendations regarding the following questions:—

1. Shall pipe line companies and their contractors be made liable for treble damages for any wilful, culpable negligence causing injury to persons or damage to property during the construction of pipe lines and the appurtenances thereto?

2. Is the gauge of pipe being used in populous areas adequate to prevent hazardous explosions?

3. Are the inspection provisions of the present regulations in this commonwealth as comprehensive as those now in force in the state of New York?

Said department shall report to the general court the results of its study, and its recommendations, if any, together with drafts of legislation necessary to carry such recommendations into effect, by filing the same with the clerk of the house of representatives not later than December first in the current year.

In accordance with chapter 574 of the Acts of 1951, the Department has adopted certain rules and regulations pertaining to the construction and operation of natural

gas pipe lines. A preliminary order of this nature was adopted after public hearing under date of November 30, 1951, effective at once. These preliminary rules were supplemented on May 6, 1952, by more detailed requirements. Copies of these rules are annexed hereto and respectively marked "Supplement A" and "Supplement B."

In compliance with the instructions contained in the 1953 resolve, the Department has analyzed the gas service safety code of the State of New York, adopted by the Public Service Commission of that State on November 14, 1952, and has compared it with the present regulations effective in this Commonwealth. The New York code differs fundamentally from the rules passed by the Department in that it applies to all gas distributing facilities within the State, whether operated by interstate transmission companies or by local distributing companies. Under General Laws, chapter 164, section 75E, as inserted by chapter 574 of the Acts of 1951, *supra*, the Department was given specific power to prescribe such rules for natural gas pipe line companies as defined in section 75B of chapter 164. Section 75E on its face, therefore, does not appear to be applicable to local distributing companies. However, there is no doubt but that the Department has power under section 76 of General Laws, chapter 164, to adopt similar safety regulations for distributing companies even if section 75E is considered not to cover such facilities. No legislation is necessary in order to enlarge the powers of the Department in this respect, and a study of possible further regulations as pertaining to local companies has been started by the Department's staff.

We shall answer in order the specific questions as to which the General Court has requested the recommendations of the Department.

1. Shall pipe line companies and their contractors be made liable for treble damages for any wilful, culpable negligence causing injury to persons or damage to property during the construction of pipe lines and the appurtenances thereto?

In the course of its order in Case 15686, the New York Public Service Commission recommended legislation of this nature, saying in part: "Certain of the pipe lines and contractors acting for them have dealt arbitrarily with residents of the State, causing damage to their properties during the construction of pipe lines and related facilities." The experience of New York State agrees with our own. Specific instances have repeatedly come to our attention where the pipe line companies have failed and refused to recognize the paramount rights of the owners of land through which their pipe lines have been laid. The Department, in granting to the pipe line companies rights of eminent domain under sections 75B to 75D of chapter 164 of the General Laws has invariably inserted in its order a requirement that, after the pipe line has been constructed, the surface of the land shall be restored as nearly as practicable to its original condition. This has not always been done, and several specific cases where the pipe line company has refused to comply with these directions have been referred to the Attorney General for appropriate action. Proceedings are pending in the Supreme Judicial Court to compel the companies to abide by the provisions of our orders in these cases. No such recourse is, of course, available to those unfortunate citizens who voluntarily deeded to the pipe line companies rights of way over their lands without reserving adequate protection.

Unfortunately, by the time the rules of the Department were adopted in November, 1951, most of the natural gas pipe line system in the Commonwealth had already been buried in its trench. The Department has, to the best of its ability and within the limits of available funds, carried out a continuous inspection since the time that its rules were adopted, to see that they were complied with. There is going to be very little construction of natural gas pipe lines within this State from now on, and a law such as is suggested would have very little practical effect. We do not understand that any legislation could constitutionally be passed which would subject the company to future damages for past acts.

Section 75F of chapter 164 of the General Laws, as added by chapter 192 of the Acts of 1952, was effective March 27, 1952. This section requires a natural gas pipe line company to restore the surface of the ground over any right of way to its original condition within sixty days under penalty of not more than \$100 per day. This statute has apparently been effective in controlling subsequent operations of these companies. However, this statute not only fails to give any relief to the landowner, but it unquestionably applies only to subsequent operations. The landowner's sole remedy is still to compel obedience to the Department's order.

However, we believe that natural gas pipe line companies can and should be made to respond adequately for any damages to persons or property resulting from future construction or from failure of their pipe lines already constructed to comply with the rules of the Department. It seems to us that the General Court may say that any pipe line which has been constructed within the State, and which does not comply with the rules of the Department, is not constructed with due care, and that the pipe line company will be made subject to penal damages in case of any accident on such a line. Such legislation carrying penal damages resulting from failure in operations can, we believe, be made applicable to all pipe lines, whether now built or to be built in the future. Legislation designed to regulate the activities of natural gas pipe line companies in accordance with the foregoing is annexed hereto as "Supplement C." We have included in this draft provision for treble damages, although we believe that the desirability of penal damages and the extent thereof are matters of legislative policy concerning which the Department should make no specific recommendation.

2. Is the gauge of pipe being used in populous areas adequate to prevent hazardous explosions?

The rules adopted by the Department under date of November 30, 1951 (Supplement A), specify that the

pipe being used within a city or near any residence, school, factory or public way shall comply with rather strict standards set up by the American Standards Association. These are well known and well recognized standards, established by an independent agency, which we have adopted after consultation with recognized authorities on the subject, and, we believe, provide adequate insurance for the safety of the public. The safety margin in such construction is so large as to render chances of failure due to this cause very remote, though, of course, no possible method of construction or inspection can give absolute assurance against any and all pipe line failures. However, studies of numerous pipe line failures throughout the country indicate that there has never been such a failure in a populous area, though we have no data as to the methods of construction which have been generally used. We believe that the legislation which has already been enacted by the General Court, together with the rules which have been adopted by the Department as they may be supplemented by the legislation annexed as "Supplement C," are adequate to insure the safety of the public in this respect, and we believe that the specific answer to the specific question, so far as we are able to give such answer, is "yes."

3. Are the inspection provisions of the present regulations in this Commonwealth as comprehensive as those now in force in the State of New York?

The New York code provides for certain reports to the Commission which are not included in the Massachusetts code. We believe that the present power of the Department to make rules is adequate for this purpose, and that no legislation is necessary in this respect. Our staff has been instructed to prepare further rules governing such reports. On the other hand, the Massachusetts code is considerably more stringent in many other respects than the New York code. The Department has a staff of inspectors who have been employed to see that the pipe line companies comply with the Department requirements.

Such staff has been held to a minimum by the unavailability of funds. The New York Commission is in a favorable position in this regard under the statute, which enables it to collect from the utility and use in a revolving fund any expense to which the State is put by reason of the operations of any particular utility. There would seem, however, to be no reason why the general funds of the Commonwealth should be burdened with the cost of inspection of natural gas pipe lines, and legislation designed to place such burden on the companies would enable the Department to retain an adequate staff for this purpose. We believe that such inspectors should be paid by the pipe line companies, although they most certainly should remain employees of the State. This would require special legislation in substantially the form annexed hereto as "Supplement D."

We suggest that, if legislation of the nature suggested in this report is enacted, it be preceded by the usual emergency preamble in order that the interest of the public may be protected as far as possible.

Respectfully submitted,

DEPARTMENT OF PUBLIC UTILITIES.

DAVID M. BRACKMAN,
Chairman.
JOHN M. WHOULEY,
JOSEPH F. CLEARY,
EDWARD L. FORD,
THOMAS A. FLAHERTY,
Commissioners.

S U P P L E M E N T A .

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC UTILITIES.

NOVEMBER 30, 1951.

D. P. U. 9734.

ORDERED:

Pursuant to chapter 574, Acts of 1951, and after due notice and a public hearing, the Department hereby adopts the following rules pertaining to the construction and operation of natural gas pipe lines to insure the safe operation thereof.

1. Any natural gas pipe line which is subjected to or is intended to be subjected to, an internal gas pressure in excess of 100 pounds per square inch gauge (above atmospheric pressure) shall be constructed in compliance with all applicable provisions of the American Standard Code for Pressure Piping promulgated by the American Standards Association of New York, New York (hereafter referred to as the "Standard Code").

2. For the purpose of applying the provisions of the Standard Code, all natural gas pipe lines referred to in Rule 1 shall be considered as falling under Division 2 of section 2 of the Standard Code, except that, unless otherwise specifically ordered by the Department, Division 1 of section 2 of the Standard Code shall be used for construction within the boundaries of a city or within a distance equal to 125 times the square of the diameter of the pipe in feet, but in every case within 200 feet of any of the following:

- (a) The boundary of a city.
- (b) A place of residence.

(c) A building used for public gatherings.

(d) Any school grounds or property devoted to school or institutional uses.

(e) Property which has been zoned as residential or suitable for public buildings by a duly authorized public body.

(f) A factory or place of business employing more than three people.

(g) A public highway or railroad.

Applications for exceptions under this Rule 2 shall provide information sufficiently complete and definite to enable determination in the field of the exact location of the proposed pipe line, and shall include a detailed description aided by maps and/or aerial photographs of the terrain through which said section is proposed to be built.

3. Notwithstanding any provisions of the Standard Code which may allow less stringent requirements, the following shall apply to construction of natural gas pipe lines in Division 1:

(a) Welded fittings shall be hydrostatically tested before installation at a pressure at least as high as required by the Standard Code for pipe adequate for the service involved.

(b) Bends in straight pipe may be made in the field only if the pipe is as strong after bending as it was before, within a 1 per cent tolerance.

(c) Pressure taps, blow-off connections and similar connections where the pipe, being connected to the main pipe line is of a diameter one quarter or less of the diameter of the main pipe line, may be fabricated in the field in accordance with paragraph 634 (c) of the Standard Code.

(d) Mitre welds shall not be used.

4. Where the pipe line is or is to be subjected to an internal pressure in excess of 200 pounds per square inch gauge, it shall not be laid or maintained under a highway pavement or under a railroad except where it is necessary to cross a highway or railroad. Wherever such crossings are required they shall be made as near as practicable at an angle of 90° to the center line of the highway or rail-

road. In the case of a railroad crossing, the pipe shall be enclosed in a casing which at least meets the requirements of the specifications in API Code No. 1102, issued by the American Petroleum Institute, entitled "Recommended Practice on Form of Agreement and Specifications for Pipe Line Crossings under Railroad Tracks." In the case of a highway crossing, the pipe shall be enclosed in a casing constructed in the same manner as required for railroad crossings, except that the minimum distance from the top of the casing to the used surface of the road shall be 4 feet, 6 inches, and the casing shall extend beyond the edges of the pavement, or of the used surface of the road where there is no pavement, a distance of not less than 25 feet, or to the line of the right of way, whichever is the lesser.

5. All pipe lines in Division 1 shall be coated with a corrosion protective material free of flaws. This coating shall be tested after a section of main is backfilled, and shall have an electrical resistance of not less than 50 ohms per 1,000 square feet of coated pipe surface exposed to the earth.

6. Suitable tests shall be made on pipe lines to insure that they are free of leaks before combustible gas pressure is put on them.

7. Air shall be purged from pipe lines in Division 1 by adequate displacement with an inert gas or water before a combustible gas is admitted. At no time shall an explosive mixture be allowed to form in the pipe line.

By order of the Department,

/s/

JAMES M. CUSHING,

Secretary.

A true copy.

Attest.

JAMES M. CUSHING,

Secretary.

SUPPLEMENT B.

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC UTILITIES.

MAY 6, 1952.

D. P. U. 9734.

ORDERED:

Pursuant to chapter 574, Acts of 1951, and after due notice and a public hearing, the Department hereby adopts the following rules, applicable to natural gas pipe lines subjected to or intended to be subjected to an internal gas pressure in excess of 100 pounds per square inch gauge, which rules supplement and are in addition to those heretofore issued under date of November 30, 1951, pertaining to the construction and operation of natural gas pipe lines to insure the safe operation thereof.

A. STRUCTURAL REQUIREMENTS.

1. *Welding*. — All welds on pipe lines shall be made in accordance with the latest edition of "Specifications for Field Welding of Pipe Lines" as promulgated by the American Gas Association.

2. *Radiographic Testing*. — Not less than 10 per cent of the welds between any two sectionalizing valves ("block valves") shall be examined radiographically in accordance with the latest revision of procedures and acceptability standards promulgated by the American Petroleum Institute and American Gas Association Joint Committee on Oil and Gas Pipe Line Field Welding Practices. Selection of welding to be examined shall be made in a manner that assures a representative sample of the work done by various welders and welding crews.

B. DESIGN.

1. *Valve Spacing.* — Sectionalizing valves (“block valves”) shall be installed and maintained at strategic points on the pipe line system with due regard to accessibility and the possible necessity for limiting the discharge of gas in the event of failure. Each pipe line system shall have an average of not less than one valve for each eight miles of pipe line for this purpose.

2. *Automatic Valves.* — Not less than 50 per cent of the sectionalizing valves which are 16 inches or larger in nominal size, shall be either continuously attended or shall be provided with automatic devices which close the valve in the event of a pipe line rupture. At large river crossings or other areas where the pipe line is exposed to extreme hazards, such automatic valves shall be installed at each side of the zone of hazard at the nearest accessible and safe point.

3. *Blow-offs.* — Automatic blow-off or pressure-relieving devices shall not be installed where the released gas will present a hazard to near-by property or persons. Manually operated blow-off valves shall not be operated at such times and in such a manner as to present a hazard to near-by property or persons.

4. *Attachment to Bridges.* — Complete plans and specifications for attachment of pipe lines to bridges shall be filed with the Department of Public Utilities not less than thirty days before the commencement of actual construction or installation, or if such construction or installation is already commenced, within five days of the effective date of these rules, so that the Commission may determine whether the public safety and the safety of the employees are being protected.

C. METHODS OF CONSTRUCTION.

1. *Condition of Pipe.* — Inspection of storage and handling of pipe shall be adequate to assure that the pipe installed will be free of nicks or other forms of damage which would tend to produce a concentration of stresses

or otherwise reduce the strength of the pipe below the requirements for acceptability at the mill.

2. *Minimum Cover.* — Main pipe shall be laid with a cover of not less than 24 inches above the top of the pipe, except where interference with other subsurface structures makes it impossible to maintain this degree of cover. In such cases of interference from other structures, the main pipe shall be laid a distance of not less than 12 inches away from such other structures. Any interfering structure which provides a space in which a substantial accumulation of an explosive mixture might accumulate in the event of a leak shall be avoided where possible, and preference shall be given to crossing over rather than under such structures. In the event that crossing over another structure results in a cover of less than 24 inches, a metallic protective shield of a thickness at least as great as the pipe shall be provided, or the pipe shall be cased.

3. *Projections.* — Any portion of a pipe line which protrudes above ground shall be conspicuously marked, fenced or otherwise protected against damage and tampering.

4. *Cathodic Protection.* — Adequate protection shall be provided for underground ferrous materials considering the adequacy of the coating, the condition of the soil, proximity of other metallic structures, and other relevant factors. The pipe line will be considered to have adequate cathodic protection if the electrical potential is reduced by the protective current to a level eighty-five hundredths of a volt below the potential of the soil, measured with respect to a standard copper sulphate half-cell.

5. *Backfilling.* — Means shall be provided to protect the pipe and its coating against damage before and during backfilling.

6. *Proximity to Buildings.* — Gas pipe lines which are to be operated at a maximum service pressure in excess of 200 per square inch gauge shall not be installed within 40 feet of buildings intended for human occupancy which were in existence prior to, or were actually under con-

struction at, the date of acquisition of the property by such pipe line company, or the date of filing of relevant route maps by the pipe line company with the Department of Public Utilities in accordance with the provisions of section 75C of chapter 462 of the Acts of 1950, whichever date is the earlier; provided, however, that no such pipe line shall be installed within 40 feet of a building intended for human occupancy which was in existence prior to or under construction at the effective date of this order.

7. *Final Pressure Tests.* — Before gas is admitted to a section of pipe line at a pressure in excess of 100 pounds per square inch gauge, the section shall be tested with a noncombustible fluid at a pressure no less than that required by paragraph 223 of the Standard Code for Division 2. Pressure tests shall be performed in a manner that will minimize dangers from leakage or rupture.

8. *Certification.* — Certification to the Commission shall be made by the company operating a pipe line that it has been tested and meets the requirements of the Standard Code and of other rules prescribed by the Commission for the stated maximum service pressure at which it will be operated. Certification shall also state the pressure at which the lines were tested, shall show the computations of maximum allowable working pressure in accordance with the provisions of the Standard Code, and shall give measurements of leakage obtained by the testing.

D. COMPRESSOR STATIONS.

1. *Piping.* — All piping in compressor stations shall be installed in accordance with the applicable provisions of the Standard Code for Division 1.

2. *Blow-offs.* — Automatic pressure relief devices shall be maintained of sufficient capacity and sensitivity to assure that the maximum allowable working pressure of any piping or equipment shall not be exceeded. Suitable provision shall be made to exhaust the gas in a safe manner. Tests and inspections shall be made to assure continued sensitivity of these devices.

3. *Safety Shut-Down.* — Each compressor station operating at pressures in excess of 200 per square inch gauge shall be provided with a manually actuated automatic device which will allow the station to be shut down from a point outside the building.

4. *Clearance.* — The building housing the compressors operating at pressures in excess of 200 per square inch gauge shall not be located within 500 feet of a building intended for human occupancy which is not under the control of the pipe line company.

5. *Fire Prevention.* — All flammable or combustible materials not in use shall be stored in separate structures built of noncombustible materials, located a safe distance from the compressor building.

All electric wiring, fixtures and devices within compressor buildings shall be designed and installed in accordance with Article 500 of the latest edition of the National Electrical Code, and shall meet the requirements thereof for Class I locations.

Gas engine crankcases shall be vented to the outside atmosphere, the vent to be of a size not smaller than the connection provided by the manufacturer.

Warning signs adequate to indicate the danger involved shall be placed in conspicuous locations around the compressor station area.

E. METER AND REGULATOR STATIONS.

1. *Piping.* — All piping in meter and regulator stations shall be in accordance with the requirements of the Standard Code for Division 1.

2. *Electrical Installations.* — All electric wiring, fixtures and devices in meter and regulator station buildings shall be designed and installed in accordance with Article 500 of the latest edition of the National Electrical Code, and shall meet the requirements thereof for Class I locations.

3. *Ventilation.* — Meter and regulator station buildings shall be provided with natural draft ventilating devices sufficient to accomplish an average of five changes of air per hour.

F. OPERATION AND MAINTENANCE.

1. *Maximum Pressure.* — At no time shall the gas pressure in any pipe line exceed the maximum service for which it was certified to the Commission. Should pressure tests be required after a line has been put in operation, the Commission shall be notified at least ten days before test pressures are applied, except where necessity for maintaining continuity of service may require notice in a shorter time.

2. *Odorization.* — All combustible gases transported or distributed by pipe line regardless of pressure shall have a distinctive odor of sufficient intensity so that a concentration of one half of one per cent in the gas in the air is readily perceptible to the normal or average olfactory senses of a person coming from fresh uncontaminated air into a closed room containing 1 part of the gas in 199 parts of air. Whenever necessary to maintain this level of intensity, a suitable odorant shall be added in accordance with the following specifications:

(a) The odorant shall be harmless to humans, non-toxic, and shall be non-corrosive to steel, iron, brass, copper and leather. It shall not be soluble in water to an extent greater than 2.5 parts by weight of the odorant to 100 parts by weight of water.

(b) The products of combustion from the odorant shall be non-toxic to a person breathing air containing these products of combustion, and shall not be corrosive or harmful to materials which normally would be exposed to such products of combustion.

(c) Equipment for introduction of the odorant into the gas shall be so designed and so built as to avoid wide variations in the level of odor in the gas. The equipment and facilities for handling the odorant shall be located where the escape of odorant would not be a nuisance.

3. *Reporting of Accidents.* — A gas pipe line company, in the event of an accident resulting in personal injury, property damage in excess of \$500, or involving public safety, which was or may have been connected with or

due to the construction or operation of pipe line facilities, regardless of pressure, shall notify the Commission thereof, by telephone or otherwise, as soon as may be reasonably possible after the occurrence of such accident. If such notice be given otherwise than in writing, it shall be confirmed in writing within five days after the occurrence of such accident. If any accident results in loss of life or serious personal injury, immediate report thereof shall be made by telephone or telegraph. The written report shall be typewritten or in ink, and shall set forth all the facts and circumstances surrounding such accident. Such gas pipe line company shall also give all reasonable assistance to the Commission in the investigation of the cause and determination of suitable means for prevention of such accidents.

4. *Maintenance of Records.* — Every gas pipe line company shall keep on file and make available to the Commission, upon request, pressure records relating to the supply of gas at each point of delivery.

Every gas pipe line company shall keep and make available to the Commission, upon request, other pressure records, flow test reports, and meter records for each point of metering.

5. *Complaints.* — Every gas pipe line company shall make prompt and full investigation of each complaint made to it, either at its office or in writing by any customer; and it shall keep a record of substantial complaints by customers, municipal officers and property owners which shall show the name and address of the complainant, the date and nature of the complaint, and the adjustment or disposal thereof.

By order of the Department,

/s/

JAMES M. CUSHING,

Secretary.

A true copy.

Attest.

JAMES M. CUSHING,

Secretary.

SUPPLEMENT C.

PROPOSED LEGISLATION.

The Commonwealth of Massachusetts

In the Year One Thousand Nine Hundred and Fifty-Four.

AN ACT TO DEFINE NEGLIGENCE IN CONSTRUCTION OF
NATURAL GAS PIPE LINES AND TO IMPOSE PENALTIES
THEREFOR.

*Be it enacted by the Senate and House of Representatives
in General Court assembled, and by the authority of the
same, as follows:*

- 1 SECTION 1. Chapter 164 of the General Laws is
2 hereby amended by inserting after section 75F the
3 following section:—
- 4 *Section 75G.* Any natural gas pipe line company
5 which constructs and operates a natural gas pipe line
6 within the commonwealth which does not comply with
7 the rules and regulations of the department adopted
8 under section seventy-five E, or which fails to restore
9 the ground surface of properties in accordance with
10 section seventy-five F, shall be deemed guilty of gross
11 negligence and shall be liable to the owner of the fee of
12 the land over which its pipe line may be constructed
13 in treble damages. Any natural gas pipe line con-
14 structed prior to the first day of June, nineteen hun-
15 dred and fifty-four, and which does not comply with
16 the rules and regulations of the department in effect
17 on such date, shall be deemed not to have been con-
18 structed with reasonable care, and any person whose

19 person or property is damaged by reason of the opera-
 20 tion of such pipe line may recover from such natural
 21 gas pipe line company treble damages for such injury.

1 SECTION 2. This act shall take effect on the first
 2 day of June, nineteen hundred and fifty-four.

SUPPLEMENT D.

PROPOSED LEGISLATION.

The Commonwealth of Massachusetts

In the Year One Thousand Nine Hundred and Fifty-Four.

AN ACT TO PROVIDE FOR INSPECTION OF NATURAL GAS PIPE LINES AND TO ASSESS THE COSTS OF SUCH INSPECTION.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

1 Chapter 164 of the General Laws is hereby amended
2 by inserting after section 75F the following section: —
3 *Section 75G.* The department may employ such
4 number of inspectors as is necessary in order to super-
5 vise the construction and operation of natural gas
6 pipe lines within the commonwealth, such number not
7 to exceed, however, one inspector for each fifty miles
8 or fraction thereof of such natural gas pipe line con-
9 structed within the commonwealth. The employment
10 of such inspectors shall be subject to the provisions of
11 chapter thirty-one. The salaries and expenses of such
12 inspectors shall be paid by the natural gas pipe line
13 companies operating within the commonwealth in pro-
14 portion to the number of miles of such pipe line op-
15 erated by each such company.

