

EPA's recommendation is based upon the occurrence in this area of violations of the maximum allowable 8-hour average CO concentration of 9.0 parts per million.

After reviewing the State's recommendation and the monitored data USEPA proposes to designate the above mentioned area as a nonattainment area for CO. A nonattainment designation will necessitate a revision to the Illinois State Implementation Plan within 9 months of final USEPA action on the designation change. The plan revision will have to contain an assessment of the causes of the nonattainment plus strategies and enforceable regulations adequate to attain the National Ambient Air Quality Standards by the statutory attainment date specified in section 172(a) of the Act.

Interested persons are invited to submit written comments on this proposed action to the above mentioned USEPA, Region V office.

Dated: November 2, 1979.

John McGuire,
Regional Administrator.

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DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Part 192

[Docket No. PS 59; Notice No. 1]

Transportation of Natural and Other Gas by Pipeline; Damage Prevention Program

AGENCY: Materials Transportation Bureau.

ACTION: Notice of proposed rulemaking.

SUMMARY: Excavation is the number one cause of damage to gas pipelines. To reduce the risk of excavation damage, new § 192.614 would require each operator of a gas pipeline in certain populated areas to establish and carry out a damage prevention plan. If adopted as a final rule, this proposal would obviate the need for line marking of buried pipelines in areas where the plan is in effect.

DATE: Interested persons are invited to submit written comments on this proposal. All comments must be filed by February 15, 1980. Late filed comments will be considered so far as practicable. Interested persons should submit as part of their written comments all the

material that is considered relevant to any statement of fact or argument made.

ADDRESS: Communications should be sent to the Docket Branch, Room 8426, between 8:30 a.m. to 5:00 p.m., Materials Transportation Bureau, U.S. Department of Transportation, 400 7th Street, S.W., Washington, D.C. 20590.

FOR FURTHER INFORMATION CONTACT: Ralph T. Simmons, 202-426-2394.

SUPPLEMENTARY INFORMATION: Need for this proposal.

This rulemaking proposal addresses

the need to reduce the number of gas pipeline failures caused by outside forces such as excavation, blasting, demolition, boring, tunneling, backfilling, and other earth moving operations (hereinafter referred to as excavation) which are carried out near underground pipelines. Outside force damage caused by excavation activities is the number one cause of pipeline failure and accidents reported under 49 CFR Part 191. Data supporting that fact for the period 1970-1977 is shown in the following table.

Accidents and Casualties Reported by Gas System Operators in Calendar Years 1970-77 Pursuant to 49 CFR, Part 191 (Individual Accident Reports)

	1970	1971	1972	1973	1974	1975	1976	1977
Total Number of Accidents.....	1,019	1,287	1,293	1,364	1,477	1,373	1,579	1,996
Deaths.....	22	45	34	35	24	14	63	36
Injuries.....	218	391	330	352	334	237	366	450
Accidents Resulting from Damage by Outside Forces ¹	643	788	849	874	1,030	981	878	1,168
Deaths.....	14	14	20	16	17	5	20	12
Injuries.....	152	152	168	161	225	131	124	162

¹Includes some accidents (approximately 20-30 percent) by outside force damage caused other than excavation or similar earthmoving activities.

For several years, the Department of Transportation (DOT) has identified excavation damage as a serious pipeline safety problem. Moreover, the National Transportation Safety Board (NTSB) has, on the basis of accident investigations and special studies, identified a direct relationship between effective excavation damage prevention programs and low excavation damage rates. However, because the large majority of damage to gas pipelines caused by outside forces is the result of activities by persons engaged in excavation and other types of construction who are not under the control of gas pipeline operators, the DOT has to this time sought solutions to the problem of outside force damage largely through non-regulatory efforts.

For example, in January 1972, the Department developed a Model Statute for protection of underground pipelines and other utilities and encouraged States and local governments to enact appropriate laws which would establish effective procedures incorporating its features. In essence, this Model Statute proposed requiring the filing of maps at a central location showing location of underground utilities and requiring that a person could not excavate a street or demolish a building until that person examined the maps to determine whether the proposed excavation or demolition would take place in an area shown on the maps. The person

planning the excavation or demolition would be required to obtain a permit to undertake such activity conditioned upon advising the utility operator having underground utilities in the immediate area of the planned excavation to enable the utility operator to mark the location of that utility and provide protection for its utility line. The Model Statute proposed a civil penalty for the excavator who failed to obtain a permit within a certain number of days before the excavation.

The DOT's 1974 revision to this Model Statute deleted the requirement for filing underground utility maps at one location. In its place, the Model Statute proposed that anyone proposing to engage in excavation and other types of construction be required to notify a central agency of this intent. The agency would then advise the utility operators in the general area of the contractor's proposed excavation in order that the utility operator could locate and mark the location of any lines which might be damaged by the excavation. Additional minor revisions were made to the Model Statute in June of 1977. This latest version of the Model Statute was published by the Council of State Governments in their 1978 publication of Suggested State Legislation.

As in the past, the Secretary of Transportation sent a copy of the revised 1974 Model Statute to all State Governors including Puerto Rico and the

Mayor of the District of Columbia, again encouraging State legislatures to enact laws which would require and support pipeline damage prevention programs.

DOT's other nonregulatory efforts included conducting education and training programs in coordination with the States and industry.

In 1975, DOT took regulatory action to reduce incidents of outside force damage to the buried lines by promulgating regulations that encouraged the establishment of State and local excavation damage prevention programs. The Federal gas pipeline safety standards for marking gas mains and transmission lines were amended (Amendment 192-20; 40 FR 13505) by providing an exception from marking buried pipelines located in Class 3 or Class 4 locations where a program for preventing interference with underground pipelines is established by law (§ 192.707(b)(2)(ii)).

DOT's regulatory and non-regulatory efforts have experienced mixed success. Some 23 States now have underground damage prevention legislation or regulations which have statewide applicability. Such States as Michigan, Connecticut, and New York have enacted comprehensive laws which apply to all persons engaged in activities likely to interfere with underground pipelines and require that these persons be provided with line marking or other information necessary to locate the pipeline before such activities are initiated. Many utility companies established a communication system called a "one-call system" in which a city, county, or other local jurisdiction or entity establishes one phone number to be called by all prospective excavators to advise pipeline and utility operators about the location and time of the intended excavation. Also, utility operator established "one-call systems" are now in operation in 35 States. Of these programs, less than half have statewide coverage, and the rest have localized coverage.

Two studies have examined the effectiveness of the damage prevention programs now in operation. A paper entitled "Excavation Damage Prevention Laws, The Challenges We Face," presented at the 1978 "International Public Works Congress", by Barry M. Sweedler and Charles H. Batten of the NTSB, made several observations regarding (1) the effectiveness of one-call notification systems in reducing damage to pipelines by outside forces and (2) the effectiveness of State laws.

Observations regarding State laws were:

While DOT's alternative requirement that gas operators have a damage prevention program mandated by law is having an effect, the effect is not encouraging. Also, while many new laws have been passed in the last two years, these laws are not consistent with one another, although most began with the DOT Model Statute. Further, the law passed by one State contains many exceptions and loopholes, and its existence has been a deterrent to the development of meaningful damage prevention programs, and another State law fails to provide any meaningful benefit, other than to provide a shelter for the gas systems from the DOT line marking requirement.

A DOT study undertaken by IIT Research Institute (IITRI) of Chicago, Illinois, determined that several factors detracted from the effectiveness of existing programs for the prevention of damage to pipelines by outside forces. These included (1) limited geographical coverage of damage prevention programs; (2) spotty enforcement of damage prevention laws; and (3) frequent absence of utility commission jurisdiction over municipal or State-owned facilities.

The above study findings should not detract from what is significant evidence of the effectiveness of certain damage prevention programs in reducing outside force damage incidents. For example, the Connecticut Underground Utility Protection Plan reduced damages to facilities of participating utilities by 38 percent during its first two years of operation; the Washington Utilities Coordinating Council of the State of Washington reduced by 68 percent the number of damage incidents to underground facilities per each 100 excavation notifications it received; the program operating in Tampa, Florida, reported a 65 percent reduction in excavation damages during its first year of operation; a Cleveland, Ohio, system reported a 45 percent reduction in damages from 1971 to 1976; two programs in the State of California, USA North and USA South, report underground damage reductions of 24 percent and 43 percent, respectively; and the Rochester, New York program, one of the first systems implemented, has consistently shown a reduction in the number of damages to underground facilities (from 1974 through 1976, this system showed a 26 percent reduction in damage to underground facilities).

Notwithstanding the increase in damage prevention programs throughout the country and the considerable success of some, MTB generally agrees with the findings of the NTSB paper and the IITRI Study and is specifically concerned with several problem areas in the establishment and implementation

of these programs. Since the issuance of § 192.707(b)(2)(ii) in 1975, many gas pipeline operators have argued that this regulation penalizes those in States or local areas that will not enact appropriate law. In those States or local areas, the operators must mark the pipeline route since an excavation damage prevention program has not been established by law even though the pipeline operator may have advocated or supported such a program. These operators argue that in many states, such legislation may not be enacted for several years, if ever. For various reasons, the number of State or local areas establishing such excavation damage prevention programs by law has slowed in the past couple of years. In the states that have enacted damage prevention programs by law, it is often the case that the enforcement agency of the State lacks jurisdiction over all operators in the states and that enforcement of the law is less than vigorous. Because of these concerns, and the less than enthusiastic response to MTB's past non-regulatory efforts, MTB believes that a new regulatory approach for solving the outside force damage problem is necessary to better ensure the public safety.

MTB proposes to meet this need by establishing a new § 192.614 which would require each operator of a gas pipeline in a class 3 or 4 location to establish and carry out an outside force damage prevention program that meets minimum performance criteria. The proposed criteria are factors that MTB believes are essential for a successful outside force damage prevention program. The proposal would allow a gas pipeline operator to achieve full or partial compliance with the proposed requirements by complying with applicable State or local laws which require action that meets the proposed criteria; or through active participation in a voluntary association which has a program to reduce the incidence of excavation damage to buried pipelines that meets the proposed criteria.

Discussion of Criteria

MTB believes that limiting the scope of the proposed damage prevention program to operators of pipelines in Class 3 or 4 locations will produce the greatest benefits at the least cost because of the high density of population and the larger amount of excavation activities occurring in these areas. For example, the IITRI Study shows that the percentage of reportable leaks that resulted in the rupture of pipe ignition of gas, explosion, or secondary explosions, is much higher in gas distribution systems, which are located

mostly in Class 3 or 4 locations. The study also shows that the probability of injuries and fatalities resulting from reportable leaks is considered higher in gas distribution systems.

The NTSB paper, the IITRI study, and MTB's analysis of successful damage prevention programs (e.g., Connecticut Underground Utility Protection Plan, Washington Utilities Coordinating Council, USA North and USA South, in the State of California, and the Rochester, New York program) show that where an operator has a well defined written damage prevention program which is well publicized, provides a means for an inquirer to receive needed information concerning pipelines at the time of initial contact, and provides quick response in locating and marking his pipeline, that the program is successful in reducing the damage to pipelines by outside forces. From MTB's analysis of accident reports and from NTSB's reports on pipeline accidents, MTB believes that a damage prevention program should have the means of furnishing an inquirer at the initial contact with the following information: if there is a pipeline located in the area of proposed excavation activities; the general location of any pipeline in the area; the approximate depth, size, operating pressure, and type of material of the pipeline; the time frame in which the pipeline will be located and marked; and the type of marking which will be used.

Also, accident reports and NTSB's reports show that in excavation activities, damage can occur to pipelines which may be remote from the actual area of contact with the pipeline, such as pulling a pipeline loose from a joint or coupling, and that disturbing of the soil around the pipeline can lead to future erosion of the soil and remove the supporting bed of the pipeline. Therefore, MTB believes that it is necessary for the operator to inspect the pipeline, during and after excavation activities, to ensure the pipeline's integrity.

By keeping a record of the date of each inquiry, the name and address of each inquirer, and the operator's response, the operator will be able to determine which excavators are cooperating with his program, which ones need further encouragement to cooperate, and by comparing the record with the analysis of the leak reports, be able to determine which excavators are causing the most incidents or damage to his pipelines. MTB believes that an analysis of the leak reports required by 49 CFR Part 191 and correlation of these with the record of inquiries received

from excavators will provide a basis for determining the effectiveness of the operator's damage prevention program and provide the operator with the information necessary to effect changes in his program to increase its effectiveness.

MTB believes that the adoption of § 192.614 as proposed would obviate the need for the marking requirements of § 192.707 in Class 3 or 4 locations. Since the purpose of marking pipelines is for the purpose of identifying the location of the pipeline to prevent damage to the pipeline by outside forces, and the proposed § 192.614 is considered a better means of accomplishing this, there would be no need to continue the requirements of § 192.707 for Class 3 or 4 locations.

Issue

MTB invites comments on the extent to which the requirements of this proposal should apply to those operators who own or have control over the property transversed by the operator's pipelines. For example, such ownership or control could affect the need to notify excavators about the existence of a damage prevention program since, in most cases, excavators would have to seek the operator's approval to enter the property. Should trailer park owners, liquefied petroleum gas operators, or municipal owned gas distribution systems be required to meet all the requirements of this proposal? If not, to what extent should they be exempt?

MTB is considering making these proposed amendments effective one year from the date the final rule is published in the Federal Register.

Note.—A Draft Evaluation of the impact is in the docket for this proceeding in accordance with Departmental proceeding for improving regulations (44 FR 11034). MTB has determined that this document does not contain a major proposal requiring preparation of a regulatory analysis under DOT procedures.

A copy of the Sweedler/Batten paper and the IITRI study is in the docket. Also, a copy of the IITRI Study may be obtained from the National Technical Information Service, Springfield, Virginia 22161.

In consideration of the foregoing, MTB proposes to amend Part 192 of Title 49 of the CFR by

1. Adding a new § 192.614 to read as follows:

§ 192.614 Damage Prevention Program.

(a) Each operator of buried pipelines in Class 3 or 4 locations shall carry out, in accordance with this section, a written program to prevent damage to

those pipelines by excavation and demolition activities. For the purpose of this section, "excavation or demolition activities" include excavation, blasting, demolition, boring, tunneling, backfilling, and other earth moving operations.

(b) Except as provided by paragraph (c), each operator of buried pipelines in Class 3 or 4 locations must do the following under the program required by paragraph (a):

(1) Determine semiannually, through appropriate means including the use of available State and local records, the names of persons who are normally engaged in excavation or demolition activities in the areas in which the pipelines are located.

(2) Prepare a notice that urges persons to telephone or otherwise notify the operator before beginning any planned excavation or demolition activities, regardless of the location of the activities. The notice must, at least semiannually, be sent to each person identified under paragraph (b)(1) of this section and conspicuously published in a newspaper with general circulation in the area in which pipelines are located.

(3) Provide a means of receiving notice of planned excavation or demolition activities.

(4) Upon receiving a notice of planned excavation or demolition activities, provide the following information to the person giving notice:

(i) Whether there are pipelines in the area of planned excavation or demolition activities that could be harmed by the activity; and

(ii) With regard to each pipeline that could be harmed—

(A) The general location, approximate depth, diameter, material, and actual operating pressure of the pipeline; and

(B) The type of temporary marking that will be provided under paragraph (b)(5)(1) of this section and when that marking will be provided.

(5) After receiving notice of planned excavation or demolition activities that could harm buried pipelines:

(i) Temporarily mark the approximate location of the pipelines before the activities begin;

(ii) Inspect the pipeline and its support for damage during and after the activities; and

(iii) Keep a record of the date and time the notice is received, the name and address of the person giving notice, and the operator's response.

(c) An operator of buried pipelines in Class 3 or 4 locations need not meet the requirements of paragraph (b) to the extent that—State law, local law, or participation in a voluntary association requires the operator to participate in a

damage prevention program which essentially meets the requirements of paragraph (b).

(d) Each operator of buried pipelines in Class 3 or 4 locations shall—

(1) Determine annually, based on reports filed under Part 191 of this chapter, whether its damage prevention program carried out under either paragraph (b) or paragraph (c) is reducing the incidence of damage to such pipelines caused by excavation or demolition activities; and

(2) If the damage incidence is increasing, or remaining at an unreasonably high level, take actions to improve the effectiveness of the program.

§ 192.707 [Amended]

2. By revising paragraph (2) of § 192.707(b) to read "In Class 3 or 4 Locations."

AUTHORITY: (49 CFR U.S.C. 1672; 49 CFR, Part 1.53(a), Appendix A of Part 1 and Paragraph (b)(2) of Appendix A to Part 106)

Issued in Washington, D.C., on November 7, 1979.

Cesar De Leon,

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Regulation, Materials Transportation Bureau.*

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