DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Parts 192 and 195

[Docket No. PS-93, Notice 2]

RIN 2137-AB 27

Proposals for Pipeline Safety

AGENCY: Office of Pipeline Safety (OPS), RSPA, DOT.

ACTION: Disposition of safety proposals.

SUMMARY: This notice gives the disposition of 18 proposals for new or amended standards for the safety of gas or hazardous liquid pipelines put forth in a February 1987 advance notice of proposed rulemaking. Many of the proposals were affected by the Pipeline Safety Reauthorization Act of 1988 and are being handled in a manner consistent with that statute. A few proposals are the subject of technical studies OPS has in progress. The remaining proposals are withdrawn from further consideration because OPS has determined further rulemaking action is not justified.

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SUPPLEMENTARY INFORMATION: On July 8, 1986, an 8-inch electric-resistance-welded petroleum products pipeline ruptured in Mounds View, Minnesota. Gasoline vapors were ignited, and an explosion and fire killed two people. Following this accident, the National Transportation Safety Board (NTSB) conducted hearings, and OPS took enforcement action against the pipeline operator. The Governor of Minnesota formed a Commission on Pipeline Safety, which on November 20, 1986, issued a report making various pipeline safety regulatory proposals. In Congress, several bills were introduced to amend the Hazardous Liquid Pipeline Safety Act of 1979 (HLPSA) and the Natural Gas Pipeline Safety Act of 1968 (NGPSA). Meanwhile, the House Energy and Commerce Committee reported its oversight findings and recommendations on pipeline safety developed earlier in the year (132 Cong. Rec. H6938).

As an aid to formulating an agency position on these various legislative and regulatory proposals, OPS published an advance notice of proposed rulemaking to seek public comment on 18 safety proposals that involved adoption of new or amended safety standards. (52 FR 4361, February 11, 1987). Over 300 responses were received as a result of the request for comments. About 30 percent of these were from Minnesota citizens, businesses, and civic groups, who expressed concern and a general desire to see changes made in the pipeline safety standards. The remainder were from pipeline operators, trade associations, governmental agencies, and others.

After issuing a report (NTSB PAR 87/02) on the Mounds View accident, the NTSB made 8 safety recommendations to OPS and DOT in separate letters dated September 9, 1987. (Recommendations P-87-20 through P-87-28). Three of these recommendations relate to proposals included in the advance notice. The pertinent recommendations are set forth below in connection with the disposition of proposals numbered 4, 6, and 16 in the advance notice.

Next, on September 23, 1987, the 18 proposals were discussed at a joint public meeting of the Technical Pipeline Safety Standards Committee and the Technical Hazardous Liquid Pipeline Safety Standards Committee. These advisory committees are organized under the NGPSA and the HLPSA to give DOT advice about the technical feasibility, reasonableness, and practicability of proposed pipeline safety standards. The summary of comments set forth below under each proposal includes the advice of the committees.

On October 31, 1988, the Pipeline Safety Reauthorization Act of 1988 (Pub. L. 100-561) (hereafter "Reauthorization Act") was enacted. Six proposals, numbered 1, 4, 5, 6, 9, and 17 in the advance notice, were affected by requirements of this statute. The disposition of these proposals is set forth below under the heading, "Reauthorization Act."

Then, in January 1989, DOT's Safety Review Task Force in the Office of the Secretary of Transportation published a report on OPS's pipeline safety program, making 23 different recommendations to improve its effectiveness. Some of these recommendations concern proposals in the advance notice. They are stated below in connection with the disposition of proposals numbered 4, 5, 6, 8, 15, and 17 in the advance notice.

The remainder of this notice gives the disposition of the 18 proposals arranged in three categories: I—Reauthorization Act (proposals affected by the Statute); II—Continuing Projects (proposals unaffected by the statute that OPS is continuing to study); and III—Proposals Withdrawn. The number in brackets immediately following the title of a proposal is the proposal's number in the advance notice.

Dispositions were made in light of public comments received, the advisory committees' views, the NTSB and Safety Task Force recommendations, and requirements of the Reauthorization Act. When a disposition indicates that future rulemaking is scheduled, the regulation identifier number (RIN) listed in DOT's Semiannual Regulatory Agenda is given in brackets. This agenda is published in the **Federal Register** in April and October each year. (See 55 FR 16420; April 23, 1990.)

I—Reauthorization Act

1. *Proposal: Information for Local Authorities.* [1] Require operators to provide local jurisdictions, fire departments, and public safety agencies within ½ mile of pipelines, maps, inventories, and descriptions of transported substances, updated as appropriate. In addition, provide local fire departments and public safety agencies a copy of each operator's operations, maintenance, and emergency manual.

Comments: Most commenters, including both operators and governmental agencies, opposed this proposal, although persons in Minnesota strongly supported it, as did commenters from the surveying and mapping industry. Operators were concerned about the high costs of preparing and delivering the material and the potential that local authorities would use the information without operator assistance to locate and operate valves (possibly improperly) in an emergency. The advisory committees did not support the proposal, but praised the efforts of California, which publishes a booklet of pipeline routes and other information useful in an emergency. The committees favored letting State agencies collect and distribute emergency response information without Federal involvement.

Disposition: Under current regulations operators are required, as part of their emergency response planning, to maintain liaison with appropriate fire, police, and other public officials. On these occasions operators give local officials information about pipeline location, potential hazards, response plans, and other useful things the officials may request.

In addition, sections 102 and 202 of the Reauthorization Act direct DOT to establish regulations requiring operators to maintain certain information about pipelines and give it to appropriate State officials who request it. The information to be provided includes maps, a description of the pipelines and products transported, the operations and maintenance manual for the pipelines, emergency response plans, and anything

else DOT considers useful. OPS has scheduled a notice of proposed rulemaking on this subject. [RIN 2137–AB 48.]

Under the existing regulations and those to be proposed, OPS believes the objectives of the proposal will be satisfied. State officials responsible for pipeline safety should be able to obtain a uniform, minimum amount of information about all pipelines in their States, both intrastate and interstate pipelines. These officials can then, at their discretion, provide useful information to appropriate local authorities.

2. *Proposal: Shutoff Valves.* [4] Convert required shutoff valves on existing pipelines to work automatically and require new pipelines to be equipped with automatic shutoff valves or remote-control shutoff valves every 20 miles in rural areas; every 4 miles in urban areas.

NTSB Recommendation P–87–22: Require the installation of remotely-operated valves on pipelines that transport hazardous liquids, and base their spacing on the population at risk.

Safety Task Force Recommendation C.4.: Develop criteria for the use of automatic and remotely controlled valves on hazardous liquid pipelines.

Comments: Although numerous commenters supported the proposal on the assumption that accelerating the time for line closure would mitigate an emergency, persons familiar with the use of automatic and remote-control block valves and accident consequences held a different view. These commenters noted that such valves are now installed only where necessary to meet special operational needs. They are not installed at regular intervals because of high installation, maintenance, and operating costs, and the potential that power or pressure changes can cause the valves to become inoperative or close unintentionally, possibly causing a harmful situation. Also, remote-control or automatic valves were said to have very little effect on safety because often, especially in populated areas, ignition of the fluid released at a line break would occur before valves could be actuated or respond automatically and shutoff flow. The advisory committees supported the need for a study to determine the costs and benefits of using remotely operated valves in populated areas.

Disposition: Based on the information in this docket and an earlier rulemaking proceeding on closely spaced valves (Docket PS–53, 46 FR 2130), there does not appear to be sufficient justification to require the installation of remote-control or automatic shutoff valves at uniform intervals along the entire length of gas and hazardous liquid pipelines. However, as required by section 305 of the Reauthorization Act, OPS is conducting a study to determine whether automatic or remote-control valves may be needed to enhance safety in critical situations along a pipeline. Information is being collected about the safety, cost, feasibility and effectiveness of requiring the use of these valves or other emergency flow restriction devices in these situations. (See Notice 1, Docket PS–104; 54 FR 20945, May 15, 1989.) This study will be submitted to Congress as required by the Reauthorization Act. If the results provide a basis for improving pipeline safety, new rulemaking will be initiated.

3. *Proposal: Pipeline Inventory.* [5] Require operators to determine and submit (to OPS) an inventory, including specifications, of the types of pipelines in their systems.

Safety Task Force Recommendation D.3.: Develop regulations for maintenance of a pipeline inventory data base, as required by the Reauthorization Act, based on the results of the data-needs-and-analysis study of RSPA's Transportation Systems Center.

Comments: Persons who supported this proposal thought OPS should develop a complete data base to be able to recognize trends in the safety of pipe of a particular type or manufacturer or the probability of failure of that pipe. Operators objected to the idea of submitting inventory data to OPS in advance of any demonstrated need for it. They argued the information OPS currently receives through its accident and annual reports is sufficient for its regulatory purposes. Additional information, they said, could be obtained upon request because most operators keep inventory data for new pipelines, although this information may not be readily available for older ones. The advisory committees suggested the amount of inventory data to be submitted to OPS could be overwhelming and impossible to analyze, and recommended studying the data collection and handling process before taking rulemaking action.

Disposition: At present OPS does not have available a data base from which to determine whether pipe of a particular characteristic or manufacturing process has failed more often than any other pipe, and which operators have particular types of pipe. In Sections 102 and 202 of the Reauthorization Act, Congress seeks to fill part of this informational void by directing DOT to issue regulations requiring operators to complete and maintain a current inventory, with appropriate information such as leak history, of all types of pipe used for the transmission of gas or hazardous liquids. OPS has scheduled a notice of proposed rulemaking on this subject [RIN 2137–AB 48], and, as the Task Force recommends, will consider the results of the data-needs-and-analysis study in developing the proposed rules. In addition, OPS needs to have part of the inventory information on hand to conduct statistical analyses and set regulatory priorities on a continuing basis. To this end, OPS will include proposed annual reporting requirements in the inventory rulemaking.

4. *Proposal: Integrity Testing.* [6] Require integrity testing (by pressure tests or "smart pigs") at least every 2 or 3 years, with frequency and type of test determined case-by-case in light of population density and certain pipeline and environmental factors.

NTSB Recommendation P–87–23: Revise 49 CFR parts 192 and 195 to include operational based criteria for determining safe service intervals for pipelines between hydrostatic tests.

Safety Task Force Recommendations C.2 and 3.: Expedite the issuance of regulations mandated by the Reauthorization Act that would require new pipelines and substantial replacements of existing pipe to be constructed to accommodate pigs. In addition, establish criteria for determining when pigging of pipelines is necessary and how often and under what conditions hydrostatic testing to assess pipeline strength and integrity is necessary.

Comments: While commenters in Minnesota favored this proposal, others objected to testing at set intervals, primarily because they assumed a high cost to benefit ratio. Additional objections were voiced regarding the potential for accidents during and as a result of hydrostatic testing, and the lack of facilities that would be needed to handle pigs. The advisory committees saw no need for hydrostatic testing at regular intervals, and thought OPS should study the circumstances in which smart pigs should be used.

Disposition: Based on the information in this proceeding and a cost/benefit study prepared previously under Sec. 210 of the HLPSA, integrity testing of all pipelines at arbitrary, fixed intervals does not appear justified.

OPS believes, however, that the integrity of pipelines should be assured by appropriate testing, with the frequency and type of test determined on the basis of operational factors, such as leak history and pipeline location. In this regard, sections 108(a) and 207(a) of

the Reauthorization Act set forth various operational factors OPS must consider in determining how frequently to inspect pipelines in carrying out its enforcement responsibilities, and what type of testing operators should be required to conduct. By considering these factors on a case-by-case basis, OPS will inspect and, as appropriate, require that the integrity of pipeline facilities be tested. Testing may involve corrosion surveys, hydrostatic testing, pig runs, or other tests as the conditions warrant.

In addition, OPS has begun a study, as required by section 304 of the Reauthorization Act, of the feasibility of requiring operators to use smart pigs to test their pipelines at periodic intervals determined by applying the operational factors under sections 108(a) and 207(a). (See Notice 1, Docket PS–105; 54 FR 20948, May 15, 1989.) This study will be submitted to Congress in 1990, and if the results are positive, new rulemaking will be initiated.

Also, as required by sections 108(b) and 207(b) of the Reauthorization Act, OPS will establish regulations to require that new and replaced gas transmission lines and hazardous liquid pipelines be designed to accommodate the passage of pigs. A notice of proposed rulemaking has been scheduled on this subject. [RIN 2137–AB 71].

Since criteria to determine what intervals are appropriate for periodic hydrostatic testing would have to account for all flaw-growth mechanisms and growth rates, OPS believes the development of such criteria is beyond the current state-of-the-art. Many flaw-growth mechanisms, for example stress corrosion cracking, depend on environmental and metallurgical conditions about which operators will have little or no knowledge. In the absence of criteria, OPS and State inspectors will judge whether hydrostatic testing is needed on the basis of operational factors that indicate the level of risk a pipeline poses.

Nevertheless, OPS believes a major portion of the benefits expected from periodic hydrostatic testing of liquid pipelines are achieved when the operating pressure of a pipeline does not exceed 80 percent of its prior test or operating pressure held for 4 or more hours. This minimum safety margin is required for hazardous liquid pipelines constructed to part 195 standards and all onshore highly volatile liquid pipelines. Other hazardous liquid pipelines may have to be hydrostatically tested or have their operating pressures reduced to provide this minimum safety margin. OPS has scheduled notice of proposed rulemaking on this subject. [RIN 2137–AB 46].

5. *Proposal: Carbon Dioxide Pipelines.* [9] Include carbon dioxide (CO_2) pipelines in the regulation of hazardous liquid pipelines.

Comments: The commenters were about evenly divided on the need to regulate CO_2 pipelines. Those in favor of regulation gave as their reasons high operating pressures and a potential for asphyxiation. Those against argued that CO_2 is non-toxic, nonflammable, and inert, and that CO_2 pipelines are largely located in undeveloped areas. The hazardous liquid advisory committee suggested that if CO_2 pipelines are to be regulated, OPS should refer to voluntary standards being developed.

Disposition: The 100th Congress was concerned about the potential for severe hazards to which the public might be exposed by the expanding use of CO_2 pipelines. Therefore, section 211 of the Reauthorization Act directs DOT to issue regulations governing the safety of these lines. A notice of proposed rulemaking was published October 12, 1989 (54 FR 41912). [RIN 2137–AB 72].

6. *Proposal: Condition Report.* [15] Require submission of 4-year comprehensive reports on the condition of pipelines (corrosion, leaks, etc.). Use them as basis for remedial action, i.e., pigs, pressure tests, replacement.

Safety Task Force Recommendation D.4.: Require hazardous liquid pipeline operators to submit annual reports on the size and condition of their systems.

Comments: Most commenters said that current information collection requirements are adequate to inform OPS about the condition of pipelines. However, there were some who wanted OPS to collect more details about the results of corrosion control inspections. The advisory committees recommended that the proposal be withdrawn.

Disposition: Under current reporting and recordkeeping requirements, operators already provide OPS extensive information about pipelines. This information includes, among other things, corrosion inspection results, the causes of leaks, and the existence of unsafe conditions. OPS and State agencies use this information along with other relevant facts about pipeline conditions obtained from site visits to determine on a case-by-case basis the need for pipeline integrity testing, replacement, or other remedial actions. In addition, as stated above under item 3, sections 102 and 202 of the Reauthorization Act direct DOT to require pipeline operators to provide pipe inventory data, including leak history. OPS has scheduled a notice of proposed rulemaking on the data operators would have to maintain and report annually to OPS. [RIN 2137–AB 48]. OPS believes that information now being collected and inventory data to be provided under sections 102 and 202 of the Reauthorization Act should accomplish the purposes of the proposed 4-year report.

7. *Proposal: One-Call System.* [17] Require operators to create or participate in "one-call" systems.

Safety Task Force Recommendation C.9.: Expedite rulemaking to extend to hazardous liquid pipelines the requirement that operators participate in outside force damage prevention programs.

Comments: The virtues of one-call systems received general acclaim, but many commenters did not believe one-call system creation or participation should be mandatory where economic or demographic considerations make alternative damage prevention programs more appropriate. In this regard, they argued that a program of personal contacts, education, and linemarking is the most cost effective approach to preventing excavation damage in rural areas. Others objected to the proposal's focus on pipeline operators, since it is known that the success of one-call systems depends on participation by all excavators and all operators of buried utilities in an area. The advisory committees advised OPS to adopt an excavation damage prevention program rule for hazardous liquid pipelines based on the existing gas pipeline rule (§ 192.614), which allows operators the choice of participating in one-call systems or conducting similar alternative programs.

Disposition: Existing part 192 regulations require gas operators to conduct damage prevention programs in urban areas. One-call system participation is discretionary under these regulations because OPS believes it would not be appropriate to mandate that pipeline companies enter into an association with other utilities that are outside DOT's jurisdiction.

OPS has proposed to amend parts 192 and 195 to require operators of gas and hazardous liquid pipelines to conduct damage prevention programs for their pipelines in both urban and rural locations. [RIN 2137 AB 47]. Under the proposal, participation in available one-call systems or creation of such systems would not be required, but participation may be used to the extent possible to satisfy the program requirements. A final rule has been scheduled in this proceeding.

In a related matter, section 303 of the Reauthorization Act directs DOT to issue regulations for its State pipeline safety grant-in-aid program that would require participating States to adopt a one-call system as it relates to the notification of pipeline operators. State agencies requesting pipeline safety grant-in-aid funds in States that have not adopted or are not seeking to adopt a one-call system in accordance with DOT's regulations may not receive the full allocation of funds to which they would otherwise be entitled. OPS has scheduled a notice of proposed rulemaking on this subject. [RIN 2137 AB 66].

The Reauthorization Act lays out nine different requirements the new one-call system regulations are to include. One of these requirements is that pipeline operators must participate in an appropriate one-call system. When put into effect under State laws, this requirement will override discretionary participation under RSPA's damage prevention program rules for pipelines subject to those laws.

8. *Proposal: Design and Construction.* [18] Provide for increased federal oversight in design and construction of new pipelines, and study the need for certification of pipeline design and construction personnel.

Comments: Commenters generally held the view that there are no pipeline design and construction problems that demand greater governmental oversight or certification of personnel. However, Minnesota commenters were concerned about the potential for problems to occur. The advisory committees recommended that OPS concentrate its efforts on establishing qualification requirements for operation and maintenance personnel.

Disposition: The available pipeline safety data do not indicate that the actions contemplated by this proposal for design and construction functions are needed. However, the data show that more attention should be given to the problem of personnel competency in the areas of operations and maintenance. Under Sections 101 and 201 of the Reauthorization Act, Congress granted DOT specific authority to require that persons performing pipeline operation and maintenance functions be tested for qualifications and certified to perform such functions. Therefore, OPS has scheduled publication of a notice of proposed rulemaking as the first step in establishing federal qualification standards for pipeline operation and maintenance functions. [RIN 2137-AB38].

II—*Continuing Projects*

1. *Proposal: Rapid Leak Detection and Isolation.* [12] Require operators to improve ability to rapidly locate and isolate leaks, through remote-control valves (spaced according to population), remotely monitored gauges and meters at pump stations, and more specific emergency procedures. Establish release (leak) detection standards for hazardous liquid pipelines.

Comments: Some operators said that computer-based pipeline simulations could be used to detect leaks in time to prevent damages. It was noted, however, that this technology is still being developed and could cost between $5 and $10 million per pipeline. Most commenters found the existing emergency-procedure requirements adequate, although some suggested specific additions, including setting a time limit for responding to an emergency, and requiring operators to contact local officials immediately when a leak is suspected. The advisory committees recommended that OPS study the performance and effectiveness of leak detection systems being developed.

Disposition: OPS believes the pipeline-simulation technology for more rapid leak detection and shutdown is not sufficiently developed for general use. Operators now are required to monitor their pipelines for leaks and other indications of abnormal operations, and to take appropriate corrective action if necessary. Still, OPS is studying the capabilities of advanced leak detection methods, including those utilizing supervisory control and data acquisition systems (Project 87-10). As mentioned above under item I-2., OPS also is studying the benefits of using remote-control or automatic valves to isolate line sections when leaks are detected. Further rulemaking with respect to rapid leak detection and shutdown will be taken if these studies demonstrate that net benefits can be achieved in particular situations.

As to emergency procedures, OPS believes the existing requirements are adequate. The suggested additions to those requirements that involve specific actions might be unworkable in many cases, considering the wide variations in pipeline locations and operating conditions. OPS plans to propose new rules regarding qualification of pipeline personnel. [RIN 2137-AB 38]. These proposed rules would require that personnel be trained in matters necessary for proper execution of emergency procedures. If placed in effect, these qualification rules would improve operators' responses to notices of leaks that constitute emergencies.

2. *Proposal: Classification of Liquid Pipelines.* [13] Require siting [class location] standards for hazardous liquid pipelines similar to those in effect for gas pipelines.

Comments: Comments were about evenly divided on the need for more stringent liquid standards based on population density, or class location. Those opposed made a point of the different properties of liquids and gases in arguing that the gas pipeline class location standards governing operating pressure or stress level would not add to the safety of liquid lines. Those in favor of the proposal asserted that increased pipe wall thickness in more populated areas has improved the ability of pipe to withstand outside force damage, and that reducing pressure or retesting with advancing population has minimized problems due to structural weakening by corrosion or other causes. The advisory committees recommended that OPS study the benefits of imposing class location requirements on liquid lines.

Disposition: Part 195 now contains many safety standards that vary in stringency according to population characteristics, although a "class location" scheme is not employed. OPS is completing a study (Project 87-11) of the need to amend these regulations to establish more stringent safety standards for hazardous liquid pipelines in populated areas. Further rulemaking action on this proposal will be taken if justified by the conclusion of this study.

3. *Proposal: Maximum Operating Pressure.* [14] Require for hazardous liquid pipelines an increased safety margin between test and operating pressure depending on population or environmental factors.

Comments: Most commenters saw no need to increase the minimum safety margin required for hazardous liquid pipelines built to part 195 standards, based on the good safety record of these pipelines and the fact that few accidents are caused by overpressure. These commenters also argued that the cost of increasing the margin on existing lines that operate near capacity would be extremely high, since pressures would have to be reduced and new lines built to maintain original capacity. Persons who supported the proposal thought liquid lines, like gas pipelines, should have an increased safety margin as population increases, and that the resulting thicker pipe walls would provide added protection against excavation damage. The advisory committees suggested that OPS defer action pending completion of the study

to determine the need for more stringent standards for hazardous liquid pipelines in populated areas (Project 87-11).

Disposition: OPS has included this proposal in its study concerning the need for more stringent standards for hazardous liquid pipelines (Project 87-11). The study will investigate whether the minimum safety margin between test and operating pressure prescribed by Part 195 is adequate for the safety of hazardous liquid pipelines. The study will take into account population and environmental factors and the greater safety margins required for high pressure gas pipelines. OPS will take further rulemaking action on this proposal if justified by the conclusion of that study.

4. *Proposal: ERW Pipe:* [16] Since seam failures in electric resistance welded pipe have caused a number of accidents, a study should be conducted to learn which ERW pipe is susceptible to seam degradation.

NTSB Recommendation P-87-26: Obtain sufficient data on low frequency, electric resistance welded pipe and determine if its continued use presents an unreasonable hazard to public safety and take appropriate regulatory action for identified deficiencies.

Comments: Some commenters felt the ERW seam-failure problem is becoming less significant with time as faulty materials are gradually removed from service. Others argued that there is still an existing hazard which should be studied to reveal details that would enable operators to choose an appropriate remedy. The advisory committees recommended that OPS defer further action until it completes its analysis of ERW pipe failures.

Disposition: OPS has completed its analysis of ERW pipe failures ("Electric Resistance Weld Pipe Failures on Hazardous Liquid and Gas Transmission Pipelines," August 1989) and found that problems are limited to pipelines constructed before 1970. The analysis shows that failures have occurred in low frequency ERW pipe, and that selective corrosion and incomplete seam fusion were contributing factors. As a result of this finding, OPS is giving special consideration to pre-1970 ERW pipe in the notice of proposed rulemaking on hydrostatic testing discussed above under Proposal 4.

In addition, OPS is monitoring industry research into the behavior of ERW seams under various levels of cathodic protection and failure modes, and has contracted with the Oregon Graduate Center to see if ERW pipe produced by different manufacturers behaves differently when subjected to corrosion. OPS also is assessing the safety measures recommended recently by the National Institute of Standards and Technology in its report on pre-1970 ERW pipe, "An Assessment of the Performance and Reliability of Older ERW Pipelines," July 1989. A decision on whether rulemaking action other than that mentioned above is needed for pre-1970 ERW pipe is pending completion of these ongoing studies.

III—Proposals Withdrawn

1. *Proposal: Additional Information for the Public.* [2] Require operators to provide landowners within ½ mile of pipelines written notice of each pipeline's existence, its location, and how to identify and respond to hazards. Also, establish standards for uniform public education programs.

Comments: Some commenters, particularly commenters in Minnesota, supported the proposal by saying people have a right to know about potential hazards to which they may be exposed. Most persons, notably pipeline operators, objected to it, however, on grounds that direct notices would create undue alarm, that landowners are not necessarily the persons at risk, and that the costs would be extremely high with little expected benefit. The advisory committees thought the proposal regarding notice to landowners should be withdrawn, and any regulatory effort should concentrate on public education.

Disposition: The pipeline safety standards require operators to conduct public education programs to enable people to recognize and report pipeline emergencies. These programs usually are conducted through mailings to landowners and excavators, advertisements, and television presentations. Although these educational programs have a common goal, their content has not been standardized because operators need flexibility to shape programs under varying operating conditions and locales.

Public education programs normally do not advise landowners of each pipeline's location. However, the presence of pipelines is made known through permanent line marking where required or voluntarily installed.

Also, landowners may contact either one-call notification systems, which are advertised widely, or the operators to have lines temporarily marked. In this regard, OPS has published a notice of proposed rulemaking regarding additional line marking in urban areas and wider use of damage prevention programs involving one-call systems (53 FR 24747, June 30, 1988). Landowners who have a need for additional pipeline information should be able to get it from the pipeline companies or State pipeline safety officials.

Considering the regulations now on the books and planned regarding public information about pipeline hazards and pipeline location and the additional costs and uncertain benefits of requiring operators to notify landowners directly about pipeline locations, OPS does not believe additional rulemaking is warranted. Therefore, OPS is withdrawing the proposal to require operators to directly notify landowners of pipeline location. The efficacy of existing public education programs will be monitored; and any rule changes OPS considers necessary will be proposed in a separate rulemaking proceeding.

2. *Proposal: Pipeline Markers.* [3] Require operators to post conspicuous signs at road crossings.

Comments: Almost all commenters supported the use of line markers at road crossings to warn excavators of the presence of buried pipelines. However, most of these commenters felt the current line marking requirements are adequate to accomplish this objective. Commenters overwhelmingly rejected the ideas of installing larger, more conspicuous signs than currently in use and placing large signs at all urban intersections without regard for esthetic considerations. The advisory committees recommended the proposal be withdrawn.

Disposition: In view of the existing regulations which require line markers of a sufficiently conspicuous size at road crossings (with exceptions for impractical situations in urban areas) and the growing use and success of State-wide one-call systems and similar programs in preventing excavation damage to pipelines, OPS is withdrawing the proposal.

3. *Pipeline Location.* [7]

Proposal: Prohibit new pipelines (other than gas distribution lines) within 150 feet of any permanently inhabited facility.

Comments: While a few commenters recognized the potential for this proposal to mitigate accident consequences (primarily property damage), most commenters focused on the difficulty and great expense of first obtaining and then controlling development on a football field size right-of-way. The advisory committees recommended that OPS postpone further action until the Transportation Research Board of the National Academy of Sciences completes its study of the adequacy of public policy for land use near pipelines.

Disposition: In 1988, the Board issued *Special Report 219, Pipelines and Public Safety*, recommending that decisions regarding appropriate land use near pipelines continue to be made at the local level of government. The Board proposed a number of actions that local governments might take to minimize the risk of pipelines, one of which was to enact laws to prevent development on pipeline rights-of-way. OPS wholeheartedly supports this approach to solving the encroachment problem. OPS believes that in view of the high costs of obtaining and controlling the use of a 300-foot wide corridor for pipelines, the speculative benefit of such a corridor, and the traditional role of local governments in making land development decisions, it is not appropriate for the Federal Government to prescribe a minimum set-back distance between pipelines and buildings. Local governments are in a better position to balance the costs of such a decision against the anticipated benefits to the community. Consequently, the proposal is withdrawn from further consideration.

4. *Proposal: Fertilizer Pipelines.* [8] Regulate pipelines that carry chemical fertilizer products.

Safety Task Force Recommendation C.8.: Monitor the transportation by pipeline of hazardous liquids not currently covered by the Federal regulations and consider expanding regulatory coverage if changes in volume and distance transported and accident rates become significant.

Comments: Besides pipelines carrying liquid anhydrous ammonia (NH_3), which are already subject to part 195, a few commenters mentioned the possible need to regulate the pipeline transportation of ammonium nitrate-urea ($NH_4NO_3-NH_2(ONH_2-H_2O)$). The advisory committees advised OPS to postpone further regulatory action until it completes its effort to identify unregulated hazardous liquid pipelines.

Disposition: Ammonium nitrate-urea is a nonflammable colorless liquid, which can threaten the environment and drinking water if spilled from a pipeline. So far as OPS is aware, it is batched with petroleum products in pipelines that are subject to part 195. In a 1988 study, OPS identified only 43 miles of ammonium nitrate-urea pipeline that were unregulated, and now this mileage has been abandoned. Therefore, the proposal is withdrawn. OPS is continuing to monitor the transportation of any unregulated liquid pipelines that may pose an unreasonable risk to public safety, and will take regulatory action as needed.

5. *Proposal: Corrosion Control.* [10] Require existing hazardous liquid pipelines to be coated or cathodically protected to prevent corrosion.

Comments: A great deal of support for this proposal was received from commenters in Minnesota. Other commenters, particularly pipeline operators, generally did not favor the proposal because of alleged high costs and low benefits. Many commenters said the high level of electrical current that would have to be impressed on bare pipe in an attempt to achieve effective cathodic protection would provide minimal benefit and could generate corrosion on other underground facilities, including pipelines. Several alternatives to the proposal were recommended, including reconditioning or replacing pipe, annual testing at active corrosion locations, frequent line patrols and tests, and close interval corrosion surveys. The advisory committee recommended withdrawal of this proposal.

Disposition: Under present requirements, existing hazardous liquid pipelines with effective external coating must be cathodically protected in their entirety to prevent corrosion. The proposal, therefore, concerned uncoated or ineffectively coated pipelines. These are required to be cathodically protected only in places on the pipeline where operators discover active corrosion through electrical surveys or direct observation.

To cathodically protect these pipelines over their entire surface area without first coating or recoating them would, as commenters indicated, require very high levels of impressed currents. Cathodic protection systems producing such high current levels would be expensive to install and maintain, and could cause unavoidable adverse consequences. To install coating on all bare or ineffectively coated buried pipelines to facilitate cathodic protection would be an enormous, costly endeavor. Moreover, raising pipe sections and coating them would create unanticipated stresses and disturb pipe foundations, introducing new risk factors. Even if these risks were mitigated successfully, it is reasonable to project that the expense of coating or recoating all existing bare or ineffectively coated lines would be far disproportionate to the expected benefits.

OPS believes that the alternatives some commenters recommended, which are being done under existing regulations or voluntary practices, provide a more reasonable approach than the proposal to resolving corrosion problems on bare or ineffectively coated lines. Therefore, OPS has decided to follow the advisory committee's recommendation and withdraw the proposal.

6. *Proposal: Double-wall Pipe.* [11] Require new hazardous liquid pipelines and existing ones in populated areas to have double-wall construction with continuous leak detection systems.

Comments: Commenters generally expressed a negative reaction to the idea of using double-wall pipe, mentioning difficulties and extreme costs of installation, repair, corrosion control, and leak detection. The advisory committees recommended that the proposal be withdrawn.

Disposition: It is clear from the comments that this proposal would require the use of an essentially undeveloped technology. OPS is particularly concerned about the potential introduction of hazards that could be created by the inherent difficulty of locating and repairing leaks in the carrier pipe, the difficulty of providing cathodic protection, and the uncertainty surrounding construction and repair techniques. It is not clear from the comments that the proposal would produce any safety benefit. Indeed, the comments indicate a safety decrease would result. OPS concludes that the proposal is impractical and infeasible. It is, therefore, withdrawn.

Authority: 49 App. U.S.C. 1672 and 2002; 49 CFR parts 1 and 106.

Issued in Washington, DC, on June 5, 1990.

George W. Tenley, Jr.,

Director, Office of Pipeline Safety.

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