

veyed each calendar year, with a different 10 percent checked each subsequent year, so that the entire system is tested in each 10-year period.

NOTE.—MTB has determined that this document does not contain a major proposal requiring preparation of a regulatory analysis under DOT procedures.

(49 U.S.C. 1872; 49 U.S.C. 1804; 49 CFR App. A of Part 1 and App. A of Part 102)

Issued in Washington, D.C., on August 28, 1978.

CESAR DE LEON,
Acting Director,
Office of Pipeline Safety Operations.
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[4910-60]

Materials Transportation Bureau

[49 CFR Part 195]

[Docket No: PS-53; Notice 11]

TRANSPORTATION OF LIQUIDS BY PIPELINE

Valve Spacing on Pipelines Carrying Highly Volatile Liquids

AGENCY: Materials Transportation Bureau.

ACTION: Notice of proposed rulemaking.

SUMMARY: This notice proposes new regulations to reduce the amount of liquid spilled in accidents involving pipelines carrying highly volatile liquids (HVL) in inhabited areas. Remotely controlled or automatic valves would be required on new pipelines and on certain existing pipelines at points more than 6.0 km (3.7 mi) from another valve. Also, most existing valves would be required to be equipped for remote control unless they are designed for automatic control. This action is taken because MTB accident reports show that HVL pipelines have caused a substantially higher percentage of deaths, injuries, and property damage than liquid pipelines carrying less volatile commodities.

DATE: Comments must be received by October 31, 1978. Late filed comments will be considered so far as practicable.

ADDRESS: Comments should identify the docket and notice numbers and be submitted in triplicate to the Docket Branch, Materials Transportation Bureau, 2100 Second Street SW., Washington, D.C. 20590. Comments are available at Docket Room 6500.

FOR FURTHER INFORMATION CONTACT:

Peggy Hammond, 202-426-0135.

SUPPLEMENTARY INFORMATION: *Need for this proposal.* This rulemaking proceeding concerns the safety problem of limiting the amount of highly volatile liquid spilled from a pipeline in areas inhabited by people. The need to reduce the amount of highly volatile liquid spilled in a pipeline accident is demonstrated by the Materials Transportation Bureau's (MTB) pipeline accident reports filed by carriers under part 195, by the National Transportation Safety Board's "Special Study of Effects of Delay in Shutting Down Failed Pipeline Systems and Methods of Providing Rapid Shutdown" (Report No. NTSB-PSS-71-1), by the Mechanics Research, Inc. report, "Rapid Shutdown of Failed Pipeline Systems and Limiting of Pressure to Prevent Pipeline Failure Due to Overpressure" (DOT-OS-30008), and by the Battelle Laboratories' report, "Transportation of Highly Volatile, Toxic, or Corrosive Liquids by Pipeline" (DOT/OPSO-75/06). Copies of these published reports are available for inspection in the docket for this proceeding at MTB's Docket Room 6500.

A definition of a "highly volatile liquid" has been proposed for adoption under part 195 in notice 1 of docket PS-51 (43 FR 35513, August 10, 1978), but is repeated here for clarity: "A highly volatile liquid (HVL) means a liquid which has an absolute vapor pressure of 10 kPa (14.5 psia) or more at 37.8° C (100° F)."

The MTB accident reports show that over the past 9 years, HVL pipelines have caused a substantially higher percentage of deaths, injuries, and property damage than liquid pipelines carrying less volatile commodities. The record of liquid pipeline accidents reported on form DOT-7000-1 from 1968 through 1977 shows that although HVL pipeline accidents comprise only 10 percent of the total number of accidents involving liquid pipelines, the HVL pipeline accidents caused 66 percent of the deaths, 50 percent of the injuries, and 30 percent of the property damage. Thus, a reduction in either the number of accidents or severity of accidents involving HVL would result in significant reductions in deaths, injuries, and property damage caused by liquid pipelines overall.

Also, these statistics clearly illustrate the higher risk posed by an HVL spill than by spills of other liquids. The higher potential for damage is due to the fact that when HVL is released into the atmosphere, it forms a gas cloud, which is a markedly different and more insidious hazard than that presented by spills of less volatile liquids. Inside a pipeline, HVL will remain a liquid as long as the pressure is higher than the vapor pressure of

the liquid. If a pipeline rupture occurs, and the pressure is reduced to atmospheric, some of the escaping liquid will immediately flash to gas. The remainder will turn to gas as it picks up heat from its surroundings. The gas forms a cloud that will move downhill or downwind depending on the terrain, type of liquid involved, and atmospheric conditions. Because it is generally heavier than air, the rapidly expanding gas cloud will tend to hug the ground as it continues to move. If a source of ignition is encountered, a petroleum gas cloud will burn or explode. In the case of anhydrous ammonia, the greatest danger is that of toxicity or asphyxiation. For either commodity, the hazards are severe.

The amount of HVL spilled in a pipeline accident is affected by a number of factors including the size of the pipeline and rupture, liquid flow rate and flow characteristics, the natural boiling point of the liquid, the time to detect a failure, time to isolate and shut down a failed section, topography of the area, and spacing of valves or other means of isolating a line section. Of these factors, only the time to detect a failure, time to isolate and shut down a failed section and spacing of valves or other means to isolate a line section can be readily affected by regulation.

Objectives. To reduce the amount of HVL spilled in pipeline accidents in inhabited areas, MTB proposes to establish two new regulations on the spacing and operation of valves. The present regulation on installation of valves, § 195.260, does not require uniform or close valve spacing, and currently part 195 does not contain a specific regulation on valve operation.

Under the proposed §§ 195.260(g) and 195.407, automatic or remote control valves would have to be installed in inhabited areas on newly constructed HVL pipelines, and on existing HVL pipelines that are replaced, relocated, or otherwise changed (see § 195.200), at points on the pipeline which are more than 6.0 km (3.7 mi) from a sectionalizing valve. In addition, the proposed § 195.407 would require that each newly installed or existing block valve on an HVL pipeline in an inhabited area be equipped for remote operation from an attended location unless the valve operates automatically or lies 6.0 km (3.7 mi) or less from a sectionalizing valve that operates remotely or automatically.

On new HVL pipelines this proposal would result in line sections 12 km (7.5 mi) or less in length that can be isolated rapidly with remote control or automatic valves. Thus, the amount of spill after a rupture is detected could be limited to that contained in a 12 km (7.5 mi) line section plus the volume

discharged before the line section is shut down.

For existing HVL pipelines, the proposal would have a somewhat different effect since line sections and valves are already in place. While under the proposed § 195.407 existing line sections that are more than 12 km (7.5 mi) long would have to be equipped for remote or automatic shutdown, those line sections would not have to be reduced in length by the installation of new valves under § 195.260(g) until a carrier replaces, relocates, or otherwise changes a part of the line section.

The use of sectionalizing valves to aid rapid shutdown and limit the amount of HVL released in a pipeline accident is supported by the NTSB study (PSS-71-1) which states on page 19: "A large proportion of the loss in the accidents was due to the inability or failure to shut down rapidly, not to the original failure * * *. By reducing the time to shut down a failed pipeline system to minimize the loss of material, the hazardous effects to the public, to persons working near the pipeline, and to property can be minimized or eliminated * * *."

The MRI study (DOT-AS-30008) also supports this approach by stating in paragraph 5.3.1.3: "* * * it is obvious that the use of remotely controlled valves could drastically decrease the amount of product loss compared to the use of manual valves." And in paragraph 5.2.3.1.2: "Strong correlations were found to exist between accident effects (the number of fatalities, the number of injuries, and the amount of property damage) and the amount of product discharge."

The benefits of rapid shutdown and sectionalizing a pipeline are discussed by the Battelle study (DOT/OPSO-75/06) which states on page 93: "The time to isolate a pump station and/or shut down the pipeline system varies with the degree of automatic controls * * *. The fact that a majority of block valves must be manually closed indicates a very long timelag in closing off a section of a damaged pipeline * * *. One remedy would be to install remote control operators on the block valves. This is only a partial solution, however, since the spacing of the valves is also a factor."

In developing this proposal, MTB has also considered the industry code for Liquid Petroleum Transportation Piping Systems, ANSI B31.4 (1974 ed.). This code in section 434.15.2 requires remote control valve installation at 7.5-mile maximum spacing in industrial, commercial, or residential areas. The ANSI B31.4 does not define "industrial, commercial, or residential areas."

MTB is proposing that valves be installed in "inhabited areas." The proposed definition of this term would include virtually all of the industrial, commercial, and residential areas mentioned in ANSI B31.4. MTB believes that an economic burden unmatched by safety benefits would be placed on those pipelines in sparsely populated areas if similar valving were required in those areas.

The proposed definition of "inhabited area" is based on the projected area that might be subjected to a hazard should an accidental release of HVL occur. NTSB accident reports show that an HVL vapor cloud has migrated as far as 1 mile before being ignited or dispersed (see NTSB-PSS-71-1, Effects of Delay in Shutting Down Failed Pipeline Systems and Methods of Providing Rapid Shutdown). The area subjected to hazard by an accidental release therefore can reasonably be described as a circle 1 mile in diameter centered on the point of release. For simplicity, an area 2 miles by 2 miles can be substituted for this circle, giving an area of 4 square miles that might be subjected to hazard by an HVL release.

To distinguish those areas where the proposed valving would be required, an "inhabited area" would be defined as those areas with more than 10 buildings intended for human occupancy within the hazardous area. The proposed level of occupancy is based on the criteria for a class 2 location for gas pipelines subject to 49 CFR Part 192.

Alternatives. The time to detect a failure and the time to isolate and shut down a failed line section are subjects of an MTB rulemaking proceeding on procedures and training for personnel in handling operational and emergency situations (43 FR 35513, August 10, 1978). Improving human response time only partially resolves the problem of limiting an HVL spill, however, because of the additional time it takes to travel to and close manually operated valves or shut down a pipeline by some other manual method. MTB believes, therefore, that HVL pipelines must have appropriately spaced automatic or remote control valving, as proposed by this notice, to adequately reduce the time it takes to isolate and shut down a line section.

Means to rapidly isolate and shut down a line section other than by automatic or remote control valving have been considered and rejected as possible regulatory alternatives. For example, strategic placement of stopple equipment and mechanical pipeline pinchers has been rejected because in addition to the traveltime involved, there also would be a long time required to uncover the pipeline and install this equipment.

Issues. MTB recognizes that compliance with this proposal might not be equitable for all carriers. Carriers who transport HVL only on an occasional basis would be required to install the same number and type of valves as those carriers transporting HVL continuously. Comment on this issue is specifically requested.

In the case of new or existing pipelines, it is important to note that in some situations new valves might have to be installed as close as 6.0 km (3.7 mi) from another valve. Although this close a spacing would be half that required for new pipelines in general, MTB believes that the situation should not arise often and it is preferable to the alternatives of not installing any valve or providing longer line sections overall.

Full retroactive application to existing HVL lines of the rule being proposed for new HVL pipelines is not considered economically feasible or prudent. In order to install valves every 12 km (7.5 mi) or less on existing HVL pipelines, it would be necessary to shut down and cut the line a great number of times. Such action would be inordinately expensive, would cause large temporary reductions in pipeline throughput, and would be hazardous in itself.

Effective date. MTB is also interested in receiving comments on what would be an appropriate effective date for the proposal, particularly how much leadtime would be needed to meet § 195.407 on existing pipelines.

Note.—MTB has determined that this document does not contain a major proposal requiring preparation of a regulatory analysis under DOT procedures.

In consideration of the foregoing, MTB proposes to amend part 195 of title 49 of the Code of Federal Regulations as follows:

1. By adding a new definition to § 195.2 as follows:

§ 195.2 Definitions.

* * * * *

"Inhabited area" means an onshore area that extends 1 mile on either side of the centerline of any continuous 2-mile length of the pipeline that has more than 10 buildings intended for human occupancy. Each separate dwelling unit in a multiple dwelling unit is counted as a separate building intended for human occupancy.

* * * * *

2. By adding a new paragraph (g) to § 195.260 to read as follows:

§ 195.260 Valves: Location.

* * * * *

(g) On a pipeline in an inhabited area that transports a highly volatile liquid, at locations that are more than 6.0 km (3.7 mi) from a sectionalizing valve.

3. By adding a new paragraph § 195.407 to read as follows:

§ 195.407 Sectionalizing valves.

Each sectionalizing valve on a pipeline in an inhabited area that transports a highly volatile liquid must be either equipped for operation at an attended location or designed to operate automatically unless it is located 6.0 km (3.7 mi) or less from a sectionalizing valve that is so equipped or designed.

(Sec. 6, Pub. L. 89-670, 80 Stat. 437 (49 U.S.C. 1655; 18 U.S.C. 831-835); 49 CFR 1.53, app. A of pt. 1, and app. A of pt. 102.)

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CESAR DELEON,
Acting Director, Office of
Pipeline Safety Operations.

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[7035-01]

**INTERSTATE COMMERCE
COMMISSION**

[49 CFR Parts 1320, 1322]

[Ex Parte Nos. 73, MC-11]

**REGULATIONS FOR PAYMENT OF RATES AND
CHARGES AND PAYMENT OF RATES AND
CHARGES OF MOTOR CARRIERS**

Informal Conferences

AGENCY: Interstate Commerce Commission.

ACTION: Informal conference to discuss modification and improvement of credit regulations.

SUMMARY: Various parties have requested the Commission to hold an informal conference to discuss the Commission's credit regulations. An informal conference with the Commission's staff will therefore be held on September 25, 1978, to discuss what would be reasonable credit regulations for rail and motor carriers.

DATE: Persons intending to participate are requested to notify the Commission by September 19, 1978.

ADDRESSES: Letters of intent to participate to: Interstate Commerce Commission, Room 5342, Washington, D.C. 20423. Informal conference scheduled for September 25, 1978, at 9:30 a.m. at 12th and Constitution Avenue NW., Hearing Room F, Washington, D.C. 20423.

**FOR FURTHER INFORMATION
CONTACT:**

Janice M. Rosenak or Harvey Gobetz, Interstate Commerce Commission, Washington, D.C. 20423, phone 202-275-7693.

SUPPLEMENTARY INFORMATION: In an order served April 20, 1977, the Commission decided to hold this proceeding in abeyance for 1 year. During this period, the Bureaus of Operations and Accounts were ordered to gather data on the frequency and magnitude of violations of the existing credit regulations including the circumvention of such rules by transport clearing organizations. In addition, the Commission indicated that it would further investigate the feasibility of implementing the proposed rules or modifications thereof as necessary to insure compliance with the Interstate Commerce Commission.

Various parties to this proceeding have filed petitions requesting that an informal conference be held where shippers, carriers, other interested persons, and the Commission's staff, can discuss the present credit regulations and how they can be modified and improved. It is hoped by petitioners that a compromise can be reached and that proposed rules be suggested. These proposed rules would then be

subject to notice and formal comment by the public.

In order to provide shippers and carriers with a forum to informally discuss and eliminate areas of controversy in the area of credit regulation, an informal conference is scheduled for September 25, 1978, at 9:30 a.m. at the Commission's Offices in Washington, D.C. Persons intending to participate are requested to notify the Commission by September 19, 1978. Letters of intent to participate should be addressed to the Interstate Commerce Commission, Room 5342, Washington, D.C. 20423.

To promote an informative discussion of needed changes, a summary of the Commission's Bureaus of Operations' and Accounts' survey of the payment and collection of freight bills is attached. Those parties who want a copy of the complete report can request a copy by writing to the Office of the Secretary, Interstate Commerce Commission, Washington, D.C. 20423.

After completion of the informal conference, a decision will be made as to whether an additional stay or relief is warranted and to what extent further Commission action is needed.

By the Commission, Chairman O'Neal.

H.G. HOMME, Jr.,
Acting Secretary.

RESULTS

	Average	Standard error
<i>Railroads</i>		
Workdays:		
From delivery to payment	'12.3	'1.1
From delivery to presentation of bill	'2.5	'0.7
From presentation of bill, on delivery to payment	'8.7	'1.4
Calendar days:		
From delivery to payment	'18.6	'1.1
From delivery to presentation of bill	'3.8	'1.8
From presentation of bill or delivery to payment	'12.7	'1.3
Average value of bills	\$1,428	\$428
Average dollar-days (calendar) from delivery to payment	\$23,225	\$3,949
Total dollar-days (calendar) (for all railroads)	\$647,000,000,000	\$110,000,000,000

Motor carriers

Workdays:		
From delivery to payment	'12.6	'1.9
From delivery to billing	'0.8	'1.3
From billing to payment or delivery to payment	'10.8	'3.3
Calendar days:		
From delivery to payment	'17.7	'2.8
From delivery to billing	'1.3	'3.1
From billing to payment or delivery to payment	'14.5	'2.0
Average value of bills	'108	'138
Average dollar-days (calendar) from delivery to payment	\$2,341	\$2,601
Total dollar-days (calendar) (for all motor carriers)	\$766,000,000,000	\$851,000,000,000

¹Days.

[FR Doc. 78-24779 Filed 9-1-78; 8:45 am]