

DEPARTMENT OF TRANSPORTATION**Research and Special Programs
Administration****49 CFR Parts 192 and 195**

[Docket No. PS-83, Notice 1]

**Transportation of Gas or Hazardous
Liquids by Pipeline; Nondestructive
Testing****AGENCY:** Materials Transportation
Bureau (MTB).**ACTION:** Notice of proposed rulemaking.

SUMMARY: This notice proposes to allow some exception to the requirements to nondestructively test 100 percent of the girth welds in certain onshore locations. In cases where testing 100 percent is impracticable, testing less than 100 percent would be allowed so long as at least 90 percent is tested. An operator who wishes to avail itself of the "90 percent testing" rule must determine that, under the circumstances, nondestructive testing is impracticable for each girth weld not tested. The existing requirements are too burdensome and without a commensurate safety benefit.

DATE: Interested persons are invited to submit written comments on this proposal. All comments must be filed by May 10, 1985. Late filed comments will be considered so far as practicable.

ADDRESS: Comments should be sent to the Dockets Branch, Room 8426, Materials Transportation Bureau, U.S. Department of Transportation, 400 7th Street SW., Washington, D.C. 20590 and identify docket and notice numbers. All comments will be available in Room 8426 for inspection and copying between 8:30 a.m. and 5:00 p.m. each work day.

FOR FURTHER INFORMATION CONTACT: Frank Robinson, (202) 426-2392.

SUPPLEMENTARY INFORMATION: Under the requirements of § 195.234(e) for hazardous liquid pipelines, 100 percent of the girth welds in the following onshore locations must be nondestructively tested, while offshore, only 90 percent of each day's welds need be tested when testing 100 percent is impracticable:

(1) At any onshore location where a loss of hazardous liquid could reasonably be expected to pollute any stream, river, lake, reservoir, or other body of water, and any offshore area unless impracticable, in which case only 90 percent of each day's welds need be tested.

(2) Within railroad or public road rights-of-way.

(3) At overhead road crossings and within tunnels.

(4) At pipeline tie-ins.

(5) Within the limits of any incorporated subdivision of a State government.

(6) Within populated areas, including but not limited to, residential subdivisions, shopping centers, schools, designated commercial areas, industrial facilities, public institutions, and places of public assembly.

For gas pipeline welds that are required to be nondestructively tested, § 192.243(d)(4) prescribes 100 percent testing within railroad or public highway rights-of-way, including tunnels, bridges, and overhead road crossings, and at pipeline tie-ins. In Class 3 and Class 4 locations (populated areas), at crossings of major or navigable rivers, and offshore, § 192.243(d)(3) requires testing 100 percent if practicable, but not less than 90 percent of each day's welds.

By letter dated May 21, 1982, the American Petroleum Institute (API) petitioned MTB (Petition No. P-19) to extend the flexibility provided by § 195.234(e)(1) for offshore areas, testing only 90 percent of each day's welds when 100 percent testing is impracticable ("90 percent testing"), to the onshore locations listed in § 195.234(e), except tie-ins. The more flexible "90 percent testing" rule was adopted for offshore pipelines because nondestructively testing 100 percent of each day's welds offshore was considered too stringent in view of the changing working conditions and unforeseeable circumstances. (41 FR 34035, August 12, 1976). In arguing that the same flexibility should apply onshore, API said that the rigors and high marginal costs of 100 percent testing combined with the low failure rate of girth welds indicate that the 100 percent nondestructive testing requirement is not cost-effective. Further, API pointed out that the hydrostatic testing requirements of Part 195 (Subpart E) provide a proof test for girth welds other than those located at tie-ins. In deciding whether to grant the API petition, MTB considered the difficulties associated with 100 percent testing. When 100 percent testing is required, every girth weld, without fail, must be tested over its entire circumference. In some cases, radiographs for welds can be lost, a weld can be overlooked and inadvertently not tested, a radiograph might not be legible, or bad weather may cause a radiograph to be skipped. In such cases and similar instances where a valid radiograph is unavailable, to require that the affected weld be

uncovered and that an inspection crew return to the site and radiograph it may be very time consuming and costly. Furthermore, as indicated by the "90 percent testing" rule in § 192.243(d)(3), the difficulties of 100 percent testing are not limited to hazardous liquid pipelines, but exist in the construction of gas pipelines as well. Therefore, MTB is considering amending both § 195.234(e) and § 192.243(d)(4) to extend the "90 percent testing" rule to all hazardous liquid and gas pipeline locations where 100 percent testing is now required, except tie-ins. It should be noted that the "90 percent testing" rule does not routinely allow an operator not to radiograph 100 percent of the girth welds. Rather an operator who wishes to avail itself of the "90 percent testing" rule must determine that under the circumstances, nondestructive testing is impracticable for each girth weld not tested.

MTB also has examined the safety impact of relaxing the 100 percent testing requirements. From the commencement of the Part 195 accident reporting requirements in 1968 for the roughly 170,000 miles of interstate hazardous liquid pipelines, involving about 22 million girth welds, a total of only 56 reportable accidents have been caused by girth weld failures. The resulting failure rate is about one for every 3,000 miles. Similarly, between 1970 and 1982, 569 leaks were reported in girth welds on the nation's 1.25 million miles of steel gas pipelines, comprising about 165 million welds, resulting in a failure rate of about one for every 2,200 miles. Thus, the failure rate of girth welds is very low for both hazardous liquid and gas pipelines.

The safety of girth welds becomes more apparent when considering that most of the pipeline on which the failure data were constructed before nondestructive testing of girth welds became mandatory under Parts 192 and 195. Also, while data do not permit a comparison of failure rates at locations where 100 percent testing is required with rates at other locations, it is significant that the low overall rates derive, in part, from onshore locations where as few as 10 percent of the daily welds are nondestructively tested (§§ 192.243(d)(1) and 195.234(d)). Given this record, MTB believes that slightly relaxing §§ 192.243(d)(4) and 195.234(e) for onshore welds other than tie-ins to provide that at least 90 percent of each day's welds be tested when testing 100 percent is impracticable should not reduce safety. Moreover, the integrity of welds that would be subject to the "90 percent testing" rule would be covered

by other requirements governing visual inspection (§§ 192.241 and 195.228), procedures for welding (§§ 192.225 and 195.214) and qualifying welders (§§ 192.227 and 195.222), and pressure tests for flaws (Part 192, Subpart J, and Part 195, Subpart E).

The proposed "90 percent testing" rules would not provide any flexibility when fewer than 10 welds are installed in one day. With such few welds, operators should not have difficulty in providing 100 percent testing as now required. Also, to reach a total of 10, an operator may aggregate all the welds installed daily at all the locations listed in the rule.

API also argued that in § 195.234(e)(6), the phrase "populated areas" too broadly defines the areas where nondestructive testing is required. API recommended that "populated areas" be limited to those specifically listed in § 195.234(e)(6). MTB believes, however, that changing the current rule as API suggested would be too restrictive, and that the list of places serves to limit an overly broad interpretation of "populated areas." For this reason, MTB is not proposing to change the current wording of this section.

Intrastate Pipelines

Part 195 now applies to interstate pipelines. In Docket PS-80 (49 FR 11226, March 26, 1984), MTB proposed to extend Part 195 to those "intrastate pipeline facilities," as defined in section 202 of the Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. 2001), that transport petroleum, petroleum products, or anhydrous ammonia. If Part 195 becomes applicable to those intrastate pipelines, MTB proposes that the proposed amendments to § 195.234 set forth below also be adopted for these pipelines.

Classification

Since this proposed rule will have a positive effect on the economy of less than \$100 million a year, will result in cost savings to consumers, industry, and government agencies, and no adverse impacts are anticipated, the proposed rule is not "major" under Executive Order 12291. Also, it is not, "significant" under Department of Transportation procedures (44 FR 11034). MTB believes that the proposed rule will reduce the costs of nondestructive testing. However, these savings are not expected to be large enough to justify the preparation of a Draft Regulatory Evaluation.

Based on the facts available concerning the impact of this rulemaking action, I certify pursuant to section 605 of the Regulatory Flexibility Act that the action will not, if adopted as final, have a significant economic impact on a substantial number of small entities.

List of Subjects in 49 CFR Parts 192 and 195

Pipeline safety, nondestructive testing, girth welds, welding.

In view of the above, MTB proposes to amend Parts 192 and 195 as follows:

PART 192—[AMENDED]

1. In § 192.243, paragraphs (d) (3) and (4) would be revised to read as follows:

§ 192.243 Nondestructive testing.

- (d) * * *
- (3) In Class 3 and Class 4 locations, at crossings of major or navigable rivers, offshore, and within railroad or public highway rights-of-way, including tunnels, bridges, and overhead road crossings, 100 percent unless impracticable, in which case at least 90 percent must be tested.
- (4) At pipeline tie-ins, 100 percent.

PART 195—[AMENDED]

2. In § 195.234, paragraph (e) would be revised and a new paragraph (g) added to read as follows:

§ 195.234 Welds: Nondestructive testing and retention of testing records.

(e) Each day's girth welds installed in the following locations must be nondestructively tested 100 percent unless impracticable, in which case at least 90 percent must be tested:

- (1) At any onshore location where a loss of hazardous liquid could reasonably be expected to pollute any stream, river, lake, reservoir, or other body of water, and any offshore area;
- (2) Within railroad or public road rights-of-way;
- (3) At overhead road crossings and within tunnels;
- (4) Within the limits of any incorporated subdivision of a State government; and
- (5) Within populated areas, including, but not limited to, residential subdivisions, shopping centers, schools, designated commercial areas, industrial facilities, public institutions, and places of public assembly.

(g) At pipeline tie-ins, 100 percent of the girth welds must be nondestructively tested.

Part 192 authority:
(49 USC 1672; 49 CFR 1.53, App. A to Part 1, and App. A to Part 106)

Part 195 authority:
(49 U.S.C. 2002; 49 CFR 1.53, App. A to Part 1, and App. A to Part 106)

Issued in Washington, D.C. on March 21, 1985.

Richard L. Beam,
Associate Director for Pipeline Safety Regulation, Materials Transportation Bureau.
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