

DEPARTMENT OF TRANSPORTATION**Research and Special Programs Administration**

49 CFR Parts 190, 192, 193, and 195

[Docket No. PS-126; Notice 1]

RIN AB-71

Passage of Instrumented Internal Inspection Devices**AGENCY:** Research and Special Programs Administration (RSPA), DOT.**ACTION:** Notice of proposed rulemaking.

SUMMARY: This notice proposes regulations requiring that new and replacement gas transmission lines and new and replacement hazardous liquid pipelines and certain carbon dioxide pipelines be designed and constructed to accommodate the passage of instrumented internal inspection devices (commonly referred to as "smart pigs"). However, the proposed rules do not apply to specific installations for which such design and construction would be impracticable. This rulemaking is mandated by statute.

DATES: RSPA invites interested persons to submit comments by January 19, 1993. We will consider late filed comments as far as practicable.

ADDRESSES: Send comments in duplicate to the Dockets Unit, room 8419, Office of Pipeline Safety Regulatory Programs, Research and Special Programs Administration, U.S. Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590. Identify the docket and notice numbers stated in the heading of this notice. All comments and docketed material will be available for inspection and copying in room 8419 between 8:30 a.m. and 5 p.m. each business day.

FOR FURTHER INFORMATION CONTACT: Kevin Saunders, 202-366-0524.

SUPPLEMENTARY INFORMATION:**Statutory mandates**

Section 108(b) of the Pipeline Safety Reauthorization Act of 1988 (hereinafter "Reauthorization Act") (Pub. L. 100-561, Oct. 31, 1988) amended section 3 of the Natural Gas Pipeline Safety Act of 1968 to add subsection (g), "Instrumented Internal Inspection Devices" (49 App. U.S.C. 1672(g)). This new subsection requires the Secretary of Transportation to establish regulations requiring that—

(1) the design and construction of new [gas] transmission facilities, and (2) when replacement of existing transmission facilities or equipment is required, the replacement of such existing facilities—be carried out, to the extent practicable, in a

manner so as to accommodate the passage through such transmission facilities of instrumented internal inspection devices (commonly referred to as "smart pigs").

Section 207(b) of the Reauthorization Act also amended section 203 of the Hazardous Liquid Pipeline Safety Act of 1979 (HLPESA) (49 App. U.S.C. 2002) to require that DOT establish similar regulations with respect to pipeline facilities subject to the HLPESA. The House Committee on Energy and Commerce said the new subsections "will facilitate but not require the increased use of instrumented internal inspection devices * * * [and] increase the ease and reduce the expense of future use of smart pigs." (H.R. Rep. No. 445, 100th Cong., 1st Sess. 15 (1987)).

Smart Pigs

In pipeline industry vernacular, a "pig" is a device used either to clean corrosion products, liquids, or debris from the inside of a pipeline or to collect data about the pipeline's physical condition. After insertion at a pig-trap, a pig is propelled through the operating pipeline by force of the commodity being transported. The name "pig" comes from a characteristic pig-like squealing noise made by a rubberized scraper as it rubs along the inside of the pipeline. Personnel use this noise to track the location of the pig in the pipeline.

If a pig is designed to collect data about the physical condition of a pipeline, it is known as a "smart pig," or an instrumented internal inspection device. These pigs employ different technologies (e.g., magnetic flux leakage) to detect various irregularities, or "anomalies," in the pipe wall, including wall thinning which is usually caused by corrosion. Smart pigs carry apparatus to record the location and relative severity of anomalies that are detected.

Benefit of Using Smart Pigs

Smart pigs have potential benefits in prevention not available through other tools. Texas Eastern Transmission Corporation's conduct of aboveground tests had shown that its 30-inch gas transmission line through Kentucky was adequately protected against corrosion. The operator did not realize, however, that the pipe lay over a strata of rock that shielded it from electrical current intended to stop corrosion. A smart pig, however, detected the presence of generalized corrosion.

Unfortunately, the line was not repaired and on February 31, 1988, it failed due to corrosion, and three injuries and extensive property damage resulted. Nonetheless, the accident

shows that aboveground corrosion surveys may not reveal all corrosion problems. In such occasions, usually where rock, a metallic casing, or disbanded coating shields protective current, a smart pig can detect the presence of corrosion.

National Transportation Safety Board

After investigating the Kentucky accident, the National Transportation Safety Board (NTSB) recommended that RSPA require operators of gas transmission lines and liquid petroleum pipelines, when repairing or modifying their systems, to install facilities to incorporate the use of in-line inspection equipment (Recommendation P-87-006). NTSB further recommended that RSPA require that all new gas and liquid transmission pipelines be constructed to facilitate the use of in-line instrumented inspection equipment (Recommendation P-87-007). The proposed rules address both recommendations.

Restrictions to the Passage of Smart Pigs

Section 304 of the Reauthorization Act directed DOT to study the feasibility of requiring operators to inspect their transmission facilities with smart pigs at periodic intervals. Results from this study revealed that about 10 percent of hazardous liquid pipelines and 40 percent of natural gas transmission lines are not constructed to allow pigs to pass through them. Passage is restricted by pipeline physical characteristics, including the following:

- (1) Pipe fittings, such as elbows or tees, that are not designed to permit pigs to proceed.
- (2) Pipe bends with too short a radius to accommodate the length of a smart pig.
- (3) Pipeline valves that do not open fully or are not full line size.
- (4) Telescoped pipe (linkage of successively smaller diameter pipe for short distances).

Pig Traps

The study conducted under section 304 of the Reauthorization Act shows that large percentages of gas transmission lines and hazardous liquid pipelines are constructed so that pigs can pass through them. Although the study also shows these lines may lack pig traps (equipment used to launch and receive pigs), once pig traps are installed, even temporarily, operators can run pigs through the lines.

RSPA does not believe that the presence of pig traps is necessary for pipelines to "accommodate the passage of * * * instrumented internal inspection devices" within the meaning

of sections 108(b) and 207(b) of the Reauthorization Act. The clear intent of this language is to ensure that pipelines provide sufficient space for unrestricted movement of pigs. While pig traps are necessary for the use of smart pigs, they are not necessary to ensure that a pipeline has sufficient space to allow a pig to pass through it. Therefore, the proposed rules would not require operators to include pig traps in the design or construction of pipelines. The installation of pig traps would be left to the discretion of the pipeline operator that could be done when an internal inspection survey is to be conducted.

As a matter of practice, most hazardous liquid pipelines, especially crude oil pipelines, currently being constructed include scraper pig traps because these lines require frequent cleaning. Scraper traps can be lengthened to accommodate internal inspection devices; i.e., smart pigs. Gas transmission pipelines are much less likely to require cleaning, and, therefore, are unlikely to be constructed to include pig traps. A decision whether pig traps should be permanent or temporary depends on the condition of the commodity being transported, the configuration of the pipeline system, and operating considerations.

Proposed Rules

Sections 108(b) and 207(b) of the Reauthorization Act require DOT to require operators to design and construct certain new pipeline facilities and replacement pipeline facilities (i.e., pipeline facilities that replace existing facilities), to the extent practicable, to accommodate the passage of smart pigs. To meet this statutory requirement, the rules proposed by this notice would, with limited exceptions, prohibit any physical restriction on the passage of a smart pig in the design or construction of new or replacement pipelines. The affected pipelines are gas transmission lines subject to part 192 (excluding gathering lines), and hazardous liquid and carbon dioxide pipelines subject to part 195. The exceptions would include manifolds, station piping, cross-overs, fittings that provide branch line junctures (such as tees and other lateral pipe connections), and any other piping that the RSPA Administrator finds in a particular case would be impracticable to design and construct to accommodate the passage of an instrumental internal inspection device. However, in the case of fittings providing branch line junctures other than in manifolds and station piping, restraining elements would have to be added to the fitting so that pigs can pass in the direction of straight flow.

To simplify the process of petitioning the Administrator to find that designing and constructing particular piping to accommodate the passage of pigs would be impracticable, RSPA is proposing to establish a procedure in 49 CFR part 190. This procedure is similar to the existing procedure in 49 CFR part 193 for seeking an administrative ruling. It would apply to all findings and approvals under parts 192, 193, and 195. The part 193 procedure, found in § 193.2015, would be removed upon adoption of the proposed part 190 procedure.

The RSPA safety standards for hazardous liquid and carbon dioxide pipelines (49 CFR part 195) currently require operators to provide for the passage of pigs in the design of pipelines. Section 195.120, "Changes in direction: Provision for internal passage," reads as follows:

Each component of a main line system, other than manifolds, that change direction within the pipeline system must have a radius of turn that readily allows the passage of pipeline scrapers, spheres, and internal inspection equipment.

In accordance with § 195.100, this rule applies to new pipelines and existing pipelines that are replaced, relocated, or otherwise changed.

However, § 195.120 does not fully meet the requirements of section 207(b) of the Reauthorization Act, because the rule is limited in scope, applying only to main line systems. Also, it does not prohibit the use of components that do not change the pipeline's direction yet restrict the passage of pigs, such as less than full opening, full-line size valves.

As set forth below, RSPA proposes to revise § 195.120 to implement section 207(b) of the Reauthorization Act. A similar rule, § 192.150, would be added to part 192 to implement section 108(b) of the Reauthorization Act.

Rulemaking Analyses

E.O. 12291 and DOT Regulatory Policies and Procedures

RSPA has concluded that the proposed rules are not major under Executive Order 12291, and are not significant under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979).

RSPA believes that the proposed rules would add minimally to the average expense of pipeline design and construction. The information RSPA has collected for the study under section 304 of the Reauthorization Act shows that about 90 percent of hazardous liquid pipelines and 60 percent of gas transmission lines have been constructed to accommodate the passage of pigs. This information

confirms RSPA's field experience that most operators are now constructing new and replacement gas transmission lines and hazardous liquid pipelines to accommodate smart pigs. Although RSPA lacks similar information about carbon dioxide pipelines subject to part 195, there are only about 10 such pipeline systems. RSPA does not expect the carbon dioxide pipeline systems to grow in mileage or to require a significant amount of replacement in the near term. Thus, those pipelines should not be greatly affected by the proposed revision of § 195.120. In addition, operators may in most cases comply with the proposed rules simply by selecting certain components (as noted above) that are of a proper shape and size to allow the passage of pigs. Such components are readily available, and considering the potential benefit of using smart pigs (as noted above), there is little, if any, financial reason not to select them.

RSPA believes a more detailed evaluation of the impact of the proposed rules is not warranted. Nevertheless, RSPA is particularly interested in receiving comments on costs and benefits. Comments on our assessment of pipeline components which restrict the passage of pigs are also welcome.

Regulatory Flexibility Act

Based on the facts available concerning the impact of this proposal, I certify under section 605 of the Regulatory Flexibility Act that it would not, if adopted as final, have a significant economic impact on a substantial number of small entities.

E.O. 12612

RSPA has analyzed this final rule under the criteria of Executive Order 12612 (52 FR 41685; October 30, 1987) and finds it does not warrant preparation of a Federalism Assessment.

List of Subjects

49 CFR Part 190

Administrative practice and procedure, Penalties, Pipeline safety.

49 CFR Part 192

Pipeline safety, Reporting and recordkeeping requirements.

49 CFR Part 193

Fire prevention, pipeline safety, reporting and recordkeeping requirements, security measures.

49 CFR Part 195

Anhydrous Ammonia, carbon dioxide, petroleum, pipeline safety, reporting and recordkeeping requirements.

In consideration of the foregoing, RSPA proposes to amend 49 CFR parts 190, 192, 193, and 195 as follows:

PART 190—[AMENDED]

1. The authority citation for part 190 continues to read as follows:

Authority: 49 App. U.S.C. 1672, 1677, 1679a, 1679b, 1680, 1681, 1804, 2002, 2006, 2007, 2008, 2009, and 2010; 49 CFR 1.53.

2. § 190.9 would be added to subpart A to read as follows:

§ 190.9 Petitions for finding or approval.

Where a rule in part 192, 193, or 195 of this chapter authorizes the Administrator to make a finding or approval, any operator may petition the Administrator to make such finding or approval. Petitions must be sent to the Administrator, Research and Special Programs Administration, 400 7th Street, SW., Washington, DC 20590, and be received at least 90 days before the operator requests that the finding or approval be made. Each petition must refer to the rule authorizing the action sought and contain information or arguments that justify the action. Unless otherwise specified, no public proceeding is held on a petition before it is granted or denied. After a petition is received, the Administrator notifies the petitioner of the disposition of the petition or, if the request requires more extensive consideration or additional information or comments are requested and delay is expected, of the date by which action will be taken.

PART 192—[AMENDED]

3. The authority citation for part 192 continues to read as follows:

Authority: 49 App. U.S.C. 1672 and 1804; 49 CFR 1.53.

4. In § 192.3, the definition of *Secretary* would be removed, and a definition of *Administrator* would be added to read as follows:

§ 192.3 Definitions.

Administrator means Administrator of the Research and Special Programs Administration or any person to whom authority in the matter concerned has been delegated.

5. Section 192.9 would be revised to read as follows:

§ 192.9 Gathering lines.

Each gathering line must comply with the requirements of this part applicable to transmission lines, except § 192.150.

6. Section 192.150 would be added to read as follows:

§ 192.150 Provision for internal passage of inspection devices.

(a) Except as provided in paragraph (b) of this section, each new transmission line and each replacement transmission line must be designed and constructed to accommodate the passage of instrumented internal inspection devices.

(b) Paragraph (a) of this section does not apply to manifolds, station piping (such as compressor stations, metering stations, or regulator stations), cross-overs, and fittings that provide branch line junctures (such as tees and other lateral connections), and any other piping that the Administrator finds in a particular case would be impracticable to design and construct to accommodate the passage of an instrumented internal inspection device. In the case of fittings providing branch line junctures, however, restraining elements must be added to the fitting so that pigs can pass in the direction of straight flow.

PART 193—[AMENDED]

7. The authority citation for part 193 continues to read as follows:

Authority: 49 App. U.S.C. 1671 *et seq.*; and 49 CFR 1.53.

8. Section 193.2015 would be removed.

PART 195—[AMENDED]

9. The authority citation for part 195 would be revised to read as follows:

Authority: 49 App. U.S.C. 2002 and 2015; 49 CFR 1.53.

10. In § 195.2, the definition of *Secretary* would be removed, and a definition of *Administrator* would be added to read as follows:

§ 195.2 Definitions.

Administrator means Administrator of the Research and Special Programs Administration or any person to whom authority in the matter concerned has been delegated.

11. In §§ 195.8, 195.56(a), 195.58, 195.106(e), and 195.280(e), the term "Secretary" would be removed and the term "Administrator" would be added in its place.

12. Section 195.120 would be revised to read as follows:

§ 195.120 Provision for internal passage of inspection devices.

(a) Except as provided in paragraph (b) of this section, each new pipeline and each replacement pipeline must be designed and constructed to accommodate the passage of instrumented internal inspection devices.

(b) Paragraph (a) of this section does not apply to manifolds, station piping (such as pump stations and metering stations), cross-overs, and fittings that provide branch line junctures (such as tees and other lateral connections), and any other piping that the Administrator finds in a particular case would be impracticable to design and construct to accommodate the passage of an instrumented internal inspection device. In the case of fittings providing branch line junctures, however, restraining elements must be added to the fitting so that pigs can pass in the direction of straight flow.

Issued in Washington, DC, on November 13, 1992.

George W. Tenley, Jr.,

Associate Administrator for Pipeline Safety,
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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB83

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for the Plant "Salix arizonica" (Arizona willow), with Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Fish and Wildlife Service (Service) proposes to list the plant *Salix arizonica* (Arizona willow) as an endangered species with critical habitat under the authority of the Endangered Species Act of 1973, as amended (Act). This riparian plant occurs in low numbers and is endemic to the slopes of Mt. Baldy, the highest peak in the White Mountains of Arizona. It is threatened by livestock and wildlife grazing, habitat degradation and loss, and fungal disease. This proposal, if made final, would implement Federal protection provided by the Act for Arizona willow. The Service seeks data and comments from the public on the proposed rule.