

**DEPARTMENT OF TRANSPORTATION****Pipeline and Hazardous Materials Safety Administration****49 CFR Part 195**

[Docket No. PHMSA-2010-0229]

RIN 2137-AE66

**Pipeline Safety: Safety of On-Shore Hazardous Liquid Pipelines**

**AGENCY:** Pipeline and Hazardous Materials Safety Administration (PHMSA), Department of Transportation (DOT).

**ACTION:** Advance notice of proposed rulemaking (ANPRM).

**SUMMARY:** PHMSA is considering whether changes are needed to the regulations covering hazardous liquid onshore pipelines. In particular, PHMSA is seeking comment on whether it should extend regulation to certain pipelines currently exempt from regulation; whether other areas along a pipeline should either be identified for extra protection or be included as additional high consequence areas (HCAs) for Integrity management (IM) protection; whether to establish and/or adopt standards and procedures for minimum leak detection requirements for all pipelines; whether to require the installation of emergency flow restricting devices (EFRDs) in certain areas; whether revised valve spacing requirements are needed on new construction or existing pipelines; whether repair timeframes should be specified for pipeline segments in areas outside the HCAs that are assessed as part of the IM; and whether to establish and/or adopt standards and procedures for improving the methods of preventing, detecting, assessing and remediating stress corrosion cracking (SCC) in hazardous liquid pipeline systems. Comments should address the public safety and environmental aspects of new requirements, as well as the cost implications and regulatory burden.

**DATES:** Persons interested in submitting written comments on this ANPRM must do so by January 18, 2011. PHMSA will consider late filed comments so far as practicable.

**ADDRESSES:** You may submit comments identified by the docket number PHMSA-2010-0229 by any of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the online instructions for submitting comments.
- *Fax:* 1-202-493-2251.
- *Mail:* Hand Delivery: U.S. DOT Docket Management System, West

Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001 between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

*Instructions:* If you submit your comments by mail, submit two copies. To receive confirmation that PHMSA received your comments, include a self-addressed stamped postcard.

**Note:** Comments are posted without changes or edits to <http://www.regulations.gov>, including any personal information provided. There is a privacy statement published on <http://www.regulations.gov>.

**FOR FURTHER INFORMATION CONTACT:**

Mike Israni, by telephone at 202-366-4571, by fax at 202-366-4566, or by mail at U.S. DOT, PHMSA, 1200 New Jersey Avenue, SE., PHP-10, Washington, DC 20590-0001.

**SUPPLEMENTARY INFORMATION:****I. Background**

Congress has authorized Federal regulation of the transportation of hazardous liquid by pipeline under the Commerce Clause of the U.S. Constitution. That authorization is codified in the Pipeline Safety Laws (49 U.S.C. 60101 *et seq.*), a series of statutes that are administered by the DOT, PHMSA. PHMSA has used that authority to promulgate comprehensive minimum safety standards for the transportation of hazardous liquid by pipeline.

Congress established the current framework for regulating hazardous liquid pipelines in the Hazardous Liquid Pipeline Safety Act of 1979, Public Law 96-129 (HLPESA). That law, modeled on the Natural Gas Pipeline Safety Act of 1968, Public Law 90-481, delegated to DOT the authority to develop, prescribe, and enforce minimum Federal safety standards for the transportation of hazardous liquids by pipeline. Congress has since enacted additional legislation that is currently codified in the Pipeline Safety Laws, including:

- In 1992, Congress added the environment to the list of statutory factors that must be considered in establishing safety standards for hazardous liquid pipelines, mandated that regulations be issued to establish criteria for operators to use in identifying and inspecting pipelines located in areas that are unusually sensitive to environmental damage, that cross a navigable waterway, or that have a high population density, and required regulations be issued to define the term "gathering line" and establish safety

standards for certain "regulated gathering lines," Public Law 102-502.

- In 1996, Congress limited the operator identification requirement mandate to pipelines that cross a waterway where a substantial likelihood of commercial navigation exists, required that certain areas where a pipeline rupture would likely cause permanent or long-term environmental damage be considered in determining whether an area is unusually sensitive to environmental damage, and mandated that regulations be issued for the qualification and testing of certain pipeline personnel, Public Law 104-304.

- In 2006, Congress mandated that regulations be issued for low-stress hazardous liquid pipelines and pipeline control room management, Public Law 109-468.

PHMSA administers compliance with these statutes and has promulgated comprehensive safety standards and regulations for the transportation of hazardous liquid by pipeline. That includes regulations for the:

- Design and construction of new pipeline systems or those that have been relocated, replaced, or otherwise changed (Subparts C and D of 49 CFR Part 195).
- Pressure testing of new pipelines (Subpart E of 49 CFR Part 195).
- Operation and maintenance of pipeline systems, including for inspecting and reburying pipelines in the Gulf of Mexico and its inlets, establishing programs for public awareness and damage prevention, managing the integrity of pipelines in HCAs, and managing the operation of pipeline control rooms (Subpart F of 49 CFR Part 195).
- Protecting steel pipelines from the adverse effects of internal and external corrosion (Subpart H of 49 CFR Part 195).
- Integrity management (IM) in High Consequence Areas (HCAs, 49 CFR 195.452).

As a result of PHMSA's review of the performance of the hazardous liquid IM program, PHMSA is considering new regulation in several areas.

**II. Advance Notice of Proposed Rulemaking**

Within this ANPRM, PHMSA is seeking public comment on six specific topic areas:

- Scope of the pipeline safety regulations and existing regulatory exceptions,
- The criteria for designation as a High Consequence Area (HCA),
- Leak detection and Emergency Flow Restricting Devices (EFRD),

- Valve spacing,
  - Repair criteria in non-HCA areas,
- and,
- Stress Corrosion Cracking (SCC).
- Each topic is discussed in more detail in this document.

#### *A. Scope of the Pipeline Safety Regulations and Existing Regulatory Exceptions*

The Pipeline Safety Regulations apply to most onshore<sup>1</sup> pipeline facilities used for the transportation of hazardous liquids, as defined in 49 CFR 195.2, to include petroleum, petroleum products, or anhydrous ammonia. The Pipeline Safety Regulations apply to any pipeline that transports a highly volatile liquid, the transportation of hazardous liquid through a pipeline other than a gathering line that has a maximum operating pressure (MOP) of greater than 20% of specified minimum yield strength (SMYS), any hazardous liquid pipeline that crosses a waterway used for commercial navigation, the transportation of hazardous liquid through regulated onshore gathering lines, and the transportation of hazardous liquid through certain low-stress pipelines.

The Pipeline Safety Regulations do not apply to all onshore hazardous liquid pipeline facilities. Exceptions are provided where required by statute, including for onshore production, refining, or manufacturing facilities; storage or in-plant piping systems associated with onshore production, refining, or manufacturing facilities; the transportation of hazardous liquid through low-pressure rural gathering lines that are less than 6-inches in diameter and not located in an area that is unusually sensitive to environmental damage; and the movement of hazardous liquid by non-pipeline modes of transportation. Regulations associated with these statutory exemptions are not under consideration in this ANPRM.

Regulatory exceptions also exist in the current Pipeline Safety Regulations. These exceptions include facilities that were determined to not pose a significant risk to public safety at the time the rule was promulgated, for example: Pipelines used to transport hazardous liquids by gravity, pipelines

used to gather hazardous liquids in certain rural areas, and pipelines used to move carbon dioxide beyond certain points in production, injection, or recovery operations.

Regulatory exceptions also include facilities that are reserved for regulation by the States or other Federal agencies, such as offshore pipelines in State waters; producer-operated on the outer continental shelf (OCS); breakout tanks that receive and store hazardous liquid, but not for reinjection and continued transportation by pipeline; non-transportation related onshore and offshore oil facilities; and underground storage facilities.

PHMSA is seeking public comment on whether the regulatory exceptions noted above should be repealed or modified. In particular:

- A.1 Should PHMSA repeal or modify:
- The exception in section 195.1(b)(2) of the Pipeline Safety Regulations for the transportation of hazardous liquid through a pipeline by gravity?
  - Any exception in sections 195.1(a)(4)(ii) or 195.11(a) for the gathering of hazardous liquids by pipeline in rural areas?
  - The exception in section 195.1(b)(10) for the transportation of carbon dioxide by pipeline downstream of certain points in injection or recovery operations?
  - The exception in sections 195.1(b)(5) for the transportation of hazardous liquid in offshore pipelines in State waters?
  - The exceptions in sections 195.1(b)(6) and (7) for the transportation of hazardous liquid in a producer-operated pipeline on the OCS?
  - The exception in section 195.2 for breakout tanks that are not used to relieve surges in a hazardous liquid pipeline system or to receive and store hazardous transported by pipeline for reinjection and continued transportation by pipeline?
  - Any other exception or limitation in the Pipeline Safety Regulations that applies to the transportation of hazardous liquid by pipeline?

A.2 Should PHMSA promulgate new or additional safety standards for:

- Underground hazardous liquid storage facilities?
- Any other pipeline facility used in the transportation of hazardous liquid by pipeline?

A.3 Should PHMSA take these actions in any particular order to best protect the public, property, or the environment?

If commenters suggest modification, PHMSA requests specific proposals for what elements of the exception should

be modified. With regards to questions A.1–A.2, PHMSA requests commenters to provide information and supporting data related to:

- The potential costs of repealing or modifying the existing regulatory exceptions listed above.
- The potential quantifiable safety and societal benefits of repealing or modifying the exceptions listed above.
- The potential impacts on small businesses of repealing or modifying the existing regulatory exceptions listed above.
- The potential environmental impacts of repealing or modifying the existing regulatory exceptions listed above.

#### *B. Definition of High Consequence Area*

A High Consequence Area (HCA) is currently defined in § 195.450 as a commercially navigable waterway, a high population area, or an other populated area. Some of these HCAs include areas with high population density, sole source drinking water supplies, and ecological resources that are unusually sensitive to environmental damage. PHMSA currently regulates approximately 173,000 miles of hazardous liquid pipelines. Approximately 76,000, or 44%, of these miles are in areas that could affect an HCA. The IM requirements specify how pipeline operators must identify, prioritize, assess, evaluate, repair and validate—through comprehensive analyses—the integrity of hazardous liquid pipelines that, in the event of a leak or failure, could affect HCAs within the United States.

Although operators may voluntarily apply IM practices to pipe line segments that are deemed to not affect an HCA, the regulations do not require operators to do so.

PHMSA is now considering what additional safety measures should be taken to increase the level of safety for those pipelines that could not affect HCA areas. PHMSA is considering whether the Integrity Management (IM) requirements in Part 195 should be the model for adding additional safety measures for pipelines that could not affect HCAs. PHMSA is also considering expanding the definition of an HCA so that more miles of pipe are subject to those requirements.

#### Questions

B.1 Should PHMSA amend the existing criteria for identifying high consequence areas, to expand the miles of pipeline included in an HCA? If so, what amendments to the criteria should PHMSA consider? Is there information

<sup>1</sup> The Pipeline Safety Statutes provide PHMSA with jurisdiction over all offshore hazardous liquid pipelines. However, PHMSA does not exercise the full measure of that authority for reasons of policy. PHMSA allows States to regulate certain offshore hazardous liquid pipelines in their own waters under 49 CFR 195.1(b)(5). PHMSA also allows the Department of the Interior to regulate certain hazardous liquid pipelines on the OCS under 49 CFR 195.1(b)(7), a provision that codifies a 1996 Memorandum of Understanding between PHMSA and DOI.

or data that supports an amendment to the existing criteria? What are the potential costs and benefits associated with an amendment to the existing criteria? How would amendments to the current criteria impact State and Local governments and other entities?

B.2 Does existing criteria capture any HCAs that, based on risk, do not provide a substantial benefit for inclusion as an HCA? Should PHMSA amend the existing criteria in any way which could better focus the identification of an HCA based on risk? Would it be more beneficial to include more miles of pipeline under existing HCA IM procedures, or, to focus more intense safety measures on the highest risk, highest consequence areas?

B.3 Should the phrase “commercially navigable waterways”, as used in the definition of an HCA, be revised to “navigable waters” or “waters of the United States” consistent with the Clean Water Act? Are there any potential cost impacts or quantifiable benefits of such a change?

B.4 What processes do pipeline operators undertake to determine whether areas surrounding pipeline right of ways (ROWs) meet the HCA criteria as set forth in 195.450? Are all areas that qualify as HCAs based on proximity to ROWs properly identified? Are there ways that PHMSA can improve the process of ROW HCA criteria determinations?

B.5 What, if any, input and/or oversight should the general public and/or local communities play in the identification of HCAs? If commenters believe that the public or local communities should provide input and/or oversight, how should PHMSA gather information and interface with these entities? Should State and Local governments be involved in the HCA identification and oversight process?

B.6 Should PHMSA develop additional safety measures, including those similar to IM, for areas outside of HCAs?

B.7 Should major road crossings and/or railway crossings be included as HCAs?

B.8 If commenters suggest modification to the existing regulatory requirements, PHMSA requests that commenters be as specific as possible. In addition, PHMSA requests commenters to provide information and supporting data related to:

- The potential costs of modifying the existing regulatory requirements.
- The potential quantifiable safety and societal benefits of modifying the existing regulatory requirements.

- The potential impacts on small businesses of modifying the existing regulatory requirements.

- The potential environmental impacts of modifying the existing regulatory requirements.

#### C. Leak Detection Equipment and Emergency Flow Restricting Devices

Better, more effective leak detection systems and technologies and Emergency Flow Restriction Devices (EFRDs) are a key means to reducing the consequences of hazardous liquid spills. EFRDs are “check valves” or remotely controlled valves (RCVs) that can be activated automatically or remotely from a control room, to isolate sections of a pipeline. The sooner these tools can detect a spill and isolate pipeline segments, the lower the impact of a pipeline accident. Leak detection can alert a pipeline operator to the presence and, with some methods, the location of a leak. An effective leak detection system can limit the consequences of a hazardous liquid spill by alerting the operator to the leak in a timely manner and allowing for faster response efforts. Leak detection systems may be incorporated into an operator’s Supervisory Control and Data Acquisition (SCADA) system for controlling the pipeline. EFRDs can limit the volume of hazardous liquid released after the location of the release has been identified. EFRDs are a critical means of reducing the consequences of a pipeline accident.

PHMSA is seeking to increase and improve the use of leak detection and EFRDs on hazardous liquids pipelines. To this end, PHMSA is considering whether to establish and/or adopt standards and procedures, through a rulemaking proceeding, for minimum leak detection requirements for all pipelines. PHMSA is also considering whether to require the installation of EFRDs in certain areas and/or provide additional guidance to operators on installing EFRDs in the optimum locations.

PHMSA has performed or sponsored numerous workshops and studies on leak detection and EFRDs over the years. As a result of continued study of leak detection issues, and the recommendations of the advisory committee, the public and industry, PHMSA implemented specific leak detection requirements in its IM rule for hazardous liquid pipelines (65 FR 75378; December 1, 2000). Some methods of leak detection include—Dynamic flow modeling, tracer chemical, release detection cable, shut-in (static) release detection, and pressure point analysis release detection

software (See 65 FR 75378, 75398–99 for detailed descriptions of these systems).

The regulation, 49 CFR 195.452(i)(3), requires an operator to have a means to detect leaks on the sections of its pipeline system that could affect HCAs. An operator must also evaluate and modify its leak detection system to protect HCAs. An operator’s evaluation must, at least, consider the following factors—length and size of the pipeline, type of product carried, the pipeline’s proximity to the HCA, the swiftness of leak detection, location of nearest response personnel, leak history and risk assessment results. The IM regulations, Appendix C to Part 195, also specify that the location of pipeline segments as it relates to the ability of the operator to detect and respond to a leak is a risk factor to be considered when establishing the frequency of assessment.

Under Section 21 of the Pipeline Inspection, Protection, Safety and Enforcement Act of 2006 (Pub. L. 109–468), Congress directed PHMSA to prepare a report on leak detection systems utilized by operators of hazardous liquid pipelines. Specifically, Congress asked for a discussion of the inadequacies of current leak detection systems, including their ability to detect ruptures, small leaks that are ongoing or intermittent, and what can be done to foster development of better technologies as well as address existing technological inadequacies. PHMSA completed the Leak Detection Technology Study on December 31, 2007. The study can be found at: <http://www.phmsa.dot.gov/pipeline/library>. In short, the study found that no single solution exists to effectively detect all hazardous liquid pipeline leaks and few exist that reliably detect small leaks.

On January 26, 2010, PHMSA issued an advisory bulletin, ADB–10–01 (75 FR 4134), reminding operators of the importance of prompt and effective leak detection capability in protecting public safety and the environment. The bulletin advised operators of all hazardous liquid pipelines, not just those subject to the IM rule, to perform an engineering analysis to determine if a computer-based leak detection system is necessary to improve leak detection performance and line balance processes. In response to this bulletin and PHMSA’s imposition of leak detection requirements in the IM rule, the National Transportation Safety Board (NTSB) closed an open safety recommendation on the installation of computer-based leak detection systems.

In the Pipeline Safety Act of 1992 (Pub. L. 102–508), Congress directed the

Office of Pipeline Safety (OPS) to survey and assess the effectiveness of EFRDs and other procedures, systems, and equipment used to detect and locate hazardous liquid pipeline ruptures, and to prescribe regulations on the circumstances where an operator of a hazardous liquid pipeline facility must use an EFRD or such other procedure, system, or equipment. In response to the mandate, an NTSB recommendation, and following a 1991 OPS report titled "Emergency Flow Restricting Devices Study," the agency issued an ANPRM soliciting public input on EFRDs. (59 FR 2802; January 19, 1994). The ANPRM also sought comments on leak detection.

OPS studied the issue for some time and explained in detail the research it had performed in the NPRM for hazardous liquid IM. (See 65 FR 21695, 21700; April 24, 2000). In the final rule, OPS concluded that the decision to install EFRDs should not be mandatory but should be left to the operator, who must consider specific factors when making the determination. The rule, 49 CFR 195.452(i)(4), requires an operator to determine whether to install an EFRD based on the operator's risk analysis. In making this determination, an operator must, at least, consider the following factors: The swiftness of leak detection and pipeline shutdown capabilities, the type of commodity carried, the rate of potential leakage, the volume that can be released, topography or pipeline profile, the potential for ignition, proximity to power sources, location of nearest response personnel, specific terrain between the pipeline segment and the high consequence area, and benefits expected by reducing the spill size. The rule, Appendix C to part 195, also requires an operator to maintain certain records on the criteria for determining EFRD installation.

There is currently no regulatory requirement to install EFRDs on pipelines not subject to the IM rule. Although the pipeline safety regulations, 49 CFR 195.260, require the installation of valves at locations that will minimize damage or pollution from accidental hazardous liquid discharges. Outside of HCA's, current regulations, §§ 195.134 and 195.444 require operators who choose to install computational pipeline monitoring (CPM) leak detection systems to comply with the American Petroleum Institute (API) standard API 1130 "Computational Pipeline Monitoring for Liquids: Pipeline Segment" in designing, operating, maintaining, testing, recordkeeping, and dispatcher training on the system.

## Questions

C.1 Should leak detection requirements be expanded to all hazardous liquid pipeline systems under PHMSA's regulatory jurisdiction? Is there a specific subset of hazardous liquid pipeline not currently subject to leak detection requirements that should be? What are the potential quantifiable costs and benefits of expanding existing hazardous liquid pipeline leak detection requirements?

C.2 What additional industry practices or standards are available for leak detection that PHMSA should consider for widespread adoption? Is there new or existing leak detection technology that PHMSA should be aware of and should consider for widespread adoption?

C.3 How do existing industry practices or standards for leak detection address the following factors: Leak size and flow rate sensitivity, response time, leak location accuracy, rates of false alarms and misses, instrument accuracy, personnel training and qualification requirements, system size and complexity (including batch line factors), leak size or leak flow rate versus response time, release volume estimation accuracy, detection of pre-existing leaks, detection of a leak in a shut-in pipeline, detection of a leak in pipelines under a slack line condition and/or during transient conditions, sensitivity to flow conditions, sensitivity to multiphase flow, retrofit feasibility, system testing and maintenance requirements?

C.4 Should current state regulations inform PHMSA's consideration of performance based leak detection standards? For example, the regulations of The Alaska Department of Environmental Conservation, (18 Alaska Administrative Code 75.055), set out minimum detection sensitivity based on a percentage of daily pipeline throughput. What specific performance measures should PHMSA consider?

C.5 If PHMSA adopts new leak detection requirements, should there be different performance standards for sensitive areas? For example, should PHMSA require operators to install more sensitive leak detection equipment, such as externally-based systems, in those areas?

C.6 If new leak detection standards were developed, what key issues should they address?

C.7 Are there statistics available on the extent to which the application of existing practices or standards has contributed to reduced spill volumes and consequences?

C.8 What industry practices or standards are available for the location

and performance requirements of EFRDs?

C.9 Do such practices or standards, if any, set maximum spill volume requirements, EFRD activation timing, or methods for integration of EFRD operation with an operator's SCADA and leak detection systems?

C.10 Should PHMSA specify the criteria where an operator must install an EFRD?

C.11 Should PHMSA mandate the use of EFRDs in all locations?

C.12 What leak detection methods or technologies require further research and development in order to demonstrate their efficacy?

C.13 If commenters suggest modification to the existing regulatory requirements, PHMSA requests that commenters be as specific as possible.

In addition, PHMSA requests commenters to provide information and supporting data related to:

- The potential costs of modifying the existing regulatory requirements.
- The potential quantifiable safety and societal benefits of modifying the existing regulatory requirements.
- The potential impacts on small businesses of modifying the existing regulatory requirements.
- The potential environmental impacts of modifying the existing regulatory requirements.

## D. Valve Spacing

Under § 195.258, valves must be installed in a location that is accessible to authorized employees. Under § 195.260, a valve must be installed on each mainline at locations along the pipeline system that will minimize damage or pollution from accidental hazardous liquid discharge, as appropriate for the terrain in open country, for offshore areas, or for population areas. In addition, valves must be installed on each side of a water crossing more than 100 feet wide from high-water mark to high-water mark and valves must be installed on each side of a reservoir holding water for human consumption. For areas covered by IM requirements, § 195.452(i)(4) states that an operator must evaluate and, if appropriate, take additional measures to prevent and mitigate the consequences of pipeline failures that could affect an HCA. One of the actions that an operator may take to protect an HCA is to install EFRDs. EFRDs are check valves or remote control valves that are operated from a location remote from where the valve is located.

In addition, the standard for the installation of valves at water crossings (100 foot wide bodies of water) may not adequately protect certain bodies of

water that are less than 100 feet wide. The current standard, which allows operators to make a subjective decision on the location of valves, may be too subjective. PHMSA is therefore reviewing the regulations to determine if the regulations should be revised to: (1) Cover more bodies of water under the provisions of § 195.260(e); (2) require the installation of valves at specified locations throughout each pipeline system; and (3) mandate the use of EFRDs, in particular remote controlled valves, in all systems, not just in HCAs. PHMSA believes that these actions are necessary to properly mitigate the release of hazardous liquids after a failure of the pipeline system has occurred.

#### Questions

D.1 What is the average distance between valves that are currently installed according to the requirements in § 195.260(c)? Are these manually operated valves or are these valves controlled remotely?

D.2 Should PHMSA adopt standards by which operators evaluate valve spacing and valve locations?

D.3 Should PHMSA specify the maximum distance between valves? If so, is there an ideal spacing to reduce risks and potential consequences? What projected costs and benefits would result from this specification?

D.4 Should PHMSA prescribe additional requirements for locating valves near HCAs beyond those currently prescribed for EFRDs?

D.5 Should PHMSA revise the standard in § 195.260(e) to include narrower bodies of water? If so, what projected costs and benefits would result from this change?

D.6 Should PHMSA consider a requirement for all valves to be capable of being controlled remotely? If so, what projected costs and benefits would result from this requirement?

D.7 Should PHMSA require installation of EFRDs to protect HCAs? If so, what projected costs and benefits would result from this requirement?

D.8 If PHMSA proposes to revise the requirements relative to valve location, should the change be applicable to all pipelines or should PHMSA only apply this change to new construction? Could they also apply any time a segment of pipe is repaired or replaced? If such a requirement were to be adopted, under what circumstances should PHMSA consider waiving this requirement? How would limitations to the applicability of this requirement (such as, limitation to new construction) impact the projected costs and benefits resulting from the requirement?

D.9 What are the cost impacts relative to changes in the requirements of valve location based on the type of valves installed?

D.10 If commenters suggest modification to the existing regulatory requirements, PHMSA requests that commenters be as specific as possible. In addition, PHMSA requests commenters to provide information and supporting data related to:

- The potential costs of modifying the existing regulatory requirements.
- The potential quantifiable safety and societal benefits of modifying the existing regulatory requirements.
- The potential impacts on small businesses of modifying the existing regulatory requirements.
- The potential environmental impacts of modifying the existing regulatory requirements.

#### E. Repair Criteria

Operators have reported that up to 86 percent of all the pipelines subject to the pipeline safety regulations have been inspected with an in-line inspection tool (*i.e.*, a “smart pig”). Since the adoption of the IM requirements into Part 195, approximately 32,000 repairs have made to those pipelines that could affect an HCA, and over 67,000 repairs have been made in pipelines deemed to not affect an HCA. The IM regulations (49 CFR 195.452(h)) require “prompt action” to address all anomalous conditions discovered. More specifically, the IM regulations mandate “immediate” pressure reduction, pipeline shutdown, or repair of the following conditions: 80 percent or greater wall loss; a predicted burst pressure less than the established maximum allowable operating pressure (MAOP) at the location of the anomaly; a dent located at the top of the pipeline (between the four and eight o’clock positions) with any indication of metal loss, cracking, or a stress riser or with a depth greater than six percent of the pipeline’s diameter; or any anomaly that in the judgment of the person designated by the operator to evaluate assessment results requires immediate action. Furthermore, operators must remediate dents at the top of the pipeline with a depth greater than three percent of the pipeline diameter and dents on the bottom of the pipeline that have any indication of metal loss, cracking, or a stress riser.

Finally, the integrity management regulations in 49 CFR 195.452 require remediation within 180 days for various conditions, including: A dent with a depth greater than two percent of a pipeline’s diameter that affects pipe curvature at a weld, a dent at the top of

the pipeline with a depth greater than two percent of the pipeline’s diameter, a dent at the bottom of the pipeline with a depth greater than six percent of the pipeline’s diameter, a calculated operating pressure less than the current established MOP at the location of the anomaly, 50 percent or greater wall loss, a determined crack, corrosion along the longitudinal weld, or a gouge or groove deeper than 12.5 percent of the nominal wall.

The assessments operators have been conducting on their pipeline segments that could affect HCAs have often extended to areas beyond the HCAs. Up to now, PHMSA has enforced the IM repair criteria as only applying to the anomalous conditions discovered in the HCAs. If through the integrity assessment or information analysis, the operator discovers anomalous conditions in the areas outside the HCA, PHMSA has allowed operators to use the prompt remediation requirements in § 195.422 rather than the IM repair time frames. PHMSA is now considering if the IM repair time frames should also be enforced to apply to the pipeline segments located in non-HCA areas when anomalous conditions in these areas are discovered through the integrity assessment or information analysis. This would provide greater assurance that defects on non-HCA related areas are repaired in a timely manner. PHMSA would like input from the public on the following:

E.1 Should anomalous conditions in non-HCA areas qualify as repair conditions subject to the IM repair schedules? If so, which ones? What projected costs and benefits would result from this requirement?

E.2 Should PHMSA consider a risk tiering—where the conditions in the HCA areas would be addressed first, followed by the conditions in the non-HCA areas? How should PHMSA evaluate and measure risk in this context, and what risk factors should be considered?

E.3 What should be the repair schedules for anomalous conditions discovered in non-HCA areas through the integrity assessment or information analysis? Would a shortened repair schedule significantly reduce risk? How should PHMSA determine guidelines for repair schedules in non-HCA areas?

E.4 Have ILI tool capability advances resulted in a need to update the “dent with metal loss” repair criteria?

E.5 Should PHMSA adopt explicit standards to account for the known accuracy of in-line inspection tools when comparing in-line inspection tool data with the repair criteria?

E.6 Should PHMSA adopt standards for conducting in-line inspections using “smart pigs,” the qualification of persons interpreting in-line inspection data, the review of ILI results including the integration of other data sources in interpreting ILI results, and/or the quality and accuracy of in-line inspection tool performance, in order to gain a greater level of assurance that injurious pipeline defects are discovered?

E.7 If commenters suggest modification to the existing regulatory requirements, PHMSA requests that commenters be as specific as possible. In addition, PHMSA requests commenters to provide information and supporting data related to:

- The potential costs of modifying the existing regulatory requirements.
- The potential quantifiable safety and societal benefits of modifying the existing regulatory requirements.
- The potential impacts on small businesses of modifying the existing regulatory requirements.
- The potential environmental impacts of modifying the existing regulatory requirements.

#### F. Stress Corrosion Cracking

Stress Corrosion Cracking (SCC) is the cracking induced from the combined influence of tensile stress and a corrosive medium. SCC has caused numerous pipeline failures on hazardous liquids pipelines, including a 2003 failure on a Kinder Morgan pipeline in Arizona, a 2004 failure on an Explorer Pipeline Company pipeline in Oklahoma, a 2005 failure on an Enterprise Products Operating line in Missouri, and a 2008 failure on an Oneok NGL Pipeline in Iowa. Better, more effective methods of preventing, detecting, assessing and remediating SCC in pipelines are important to making further reductions in pipeline failures.

PHMSA is seeking to improve understanding and mitigation of SCC threats on hazardous liquids pipelines. To this end, PHMSA is considering whether to establish and/or adopt standards and procedures, through a rulemaking proceeding, for improving the methods of preventing, detecting, assessing and remediating SCC in hazardous liquid pipeline systems.

PHMSA has taken numerous steps over many years to improve the understanding and mitigation of SCC hazardous liquids pipelines. These have included public workshops and studies on SCC. Initiatives taken, sponsored and/or supported by PHMSA designed to enhance understanding of SCC include:

- 1999 and 2004 SCC Studies— Two comprehensive studies on SCC were conducted for PHMSA’s predecessor agency, the Research and Special Programs Administration (RSPA). First, “Stress Corrosion Cracking Study,” Report No. DTRS56, prepared by General Physics Corporation in May 1999. Second, “Stress Corrosion Cracking Study,” Report No. DTRS56–02–D–70036, submitted by Michael Baker Jr., Inc., in September 2004. These studies sought to improve understanding of SCC and to identify practical methods to prevent, detect and address SCC as well as provide a framework for potential future research. The 2004 study is available at: <http://primis.phmsa.dot.gov/meetings/DocHome.mtg?doc=1>.

- Liquid IM Rules—The IM rule (65 FR 75378; December 1, 2000) for hazardous liquid pipelines in high consequence areas included guidance on the types of internal inspection tools operators should use for the integrity assessments required as part of their IM plans. Appendix C to Part 195, “Guidance for Implementation of an IM Program,” provides that crack detection tools should be used for detecting cracks and crack-like features, including SCC, where such features are a risk factor on the pipeline segment.

- 2003 Advisory Bulletin— In response to three SCC-driven failures of hazardous liquid pipelines in the US in 2003 and other SCC incidents around the world, PHMSA issued an advisory bulletin, “Stress Corrosion Cracking Threats to Gas and Hazardous Liquid Pipelines” (68 FR 58166; October 8, 2003), urging all pipeline owners and operators to consider SCC as a possible safety risk on their pipeline systems and to include SCC assessment and remediation in their IM plans, for those systems subject to IM rules. For systems not subject to the IM rules, the bulletin urged owners and operators to assess the impact of SCC on pipeline integrity and to plan integrity verification activities accordingly.

- 2003 Public Workshop— PHMSA sponsored a public workshop on SCC on December 3, 2003, in Houston, TX. Numerous PHMSA representatives, state officials, industry, consultants and officials from the National Energy Board of Canada attended and shared their respective experiences with SCC. The workshop also served as a forum for identifying issues for consideration in the 2004 Baker SCC study.

- 2005 Rulemaking—PHMSA issued rules that covered direct assessment, a process of managing the effects of external corrosion, internal corrosion or SCC on pipelines made primarily of

steel or iron. “Standards for Direct Assessment of Gas and Hazardous Liquid Pipelines” (70 FR 61571; October 25, 2005). In the portion of the proposed rulemaking applicable to direct assessment of SCC on hazardous liquid pipeline facilities, PHMSA considered cross-referencing certain existing Part 192 gas regulations, and the associated American Society of Mechanical Engineers (ASME) B31.8S standard. B31.8S includes specific standards for SCC. PHMSA later determined that such a cross-reference would be problematic for a variety of reasons, including the fact that B31.8S was developed for and limited to onshore gas pipeline systems. At that time, the Technical Hazardous Liquid Pipeline Safety Standards Committee (THLPSSC) recommended that PHMSA consider adopting a standard that NACE International was developing for direct assessment of SCC. PHMSA elected to consider the recently published NACE Standard “RP0204–2004, Stress Corrosion Cracking Direct Assessment Methodology” for possible future rulemaking action.

#### Questions

##### *Existing Standards:*

F.1 Current Federal pipeline safety regulations for hazardous liquids, § 195.553, Appendix C to Part 195, and § 195.588, address direct assessment of SCC but do not set forth standards for performing direct assessment, other types of assessments, or how to prevent or remediate SCC. Does the NACE SP0204–2008 (formerly RP0204) Standard “Stress Corrosion Cracking Direct Assessment Methodology” address the full lifecycle concerns associated with SCC? Should PHMSA consider this, or any other standards to govern the SCC assessment procedures? Do these standards vary significantly from existing practices associated with SCC assessments?

F.2 Are there statistics available on the extent to which the application of the NACE Standard, or other standards, have affected the number of SCC indications operators have detected on their pipelines and the number of SCC-related pipeline failures?

F.3 Are there practices or standards that address prevention, detection, assessment, and remediation of SCC on hazardous liquid pipeline systems?

F.4 If new standards were to be developed for SCC, what key issues should they address?

##### *Existing Industry Practices:*

PHMSA is interested in the extent to which operators have implemented Canadian Energy Pipeline Association (CEPA) Stress Corrosion Cracking,

Recommended Practices 2nd Edition, 2007, and what the results have been.

F.5 Are there statistics available on the extent to which hazardous liquid pipeline operators apply the CEPA practices?

F.6 Are there statistics available that compare the number of SCC indications detected and SCC-related failures, between operators applying the CEPA practices and those applying other SCC standards or practices?

F.7 Do the CEPA practices address the full lifecycle concerns associated with SCC?

F.8 Are there additional industry practices that address SCC?

*The Effectiveness of SCC Detection Tools and Methods:*

F.9 Are there statistics available on the extent to which various tools and methods can accurately detect and determine the severity of SCC?

F.10 Are tools or methods available to accurately detect and determine the severity of SCC when it is associated with longitudinal pipe seams?

F.11 Should PHMSA require that operators perform a critical analysis of all factors that influence SCC to determine if SCC is a credible threat for each pipeline segment? What experience-based indications have proven reliable in determining whether SCC could be present?

F.12 Should PHMSA require an integrity assessment using methods capable of detecting SCC whenever a credible threat of SCC is identified?

F.13 Should PHMSA require a periodic analysis of the effectiveness of operator corrosion management programs, which integrate information about cathodic protection, coating anomalies, in-line inspection data, corrosion coupon data, corrosion inhibitor usage, analysis of corrosion products, environmental and soil data, and any other pertinent information related to corrosion management?

F.14 What further action should be taken to address corrosion issues?

F.15 If commenters suggest modification to the existing regulatory requirements, PHMSA requests that commenters be as specific as possible. In addition, PHMSA requests commenters to provide information and supporting data related to:

- The potential costs of modifying the existing regulatory requirements.
- The potential quantifiable safety and societal benefits of modifying the existing regulatory requirements.
- The potential impacts on small businesses of modifying the existing regulatory requirements.
- The potential environmental impacts of modifying the existing regulatory requirements.

### III. Regulatory Notices

#### A. Executive Order 12866 and DOT Regulatory Policies and Procedures

E.O. 12866 requires agencies to regulate in the “most cost-effective manner,” to make a “reasoned determination that the benefits of the intended regulation justify its costs,” and to develop regulations that “impose the least burden on society.” We therefore request comments, including specific data if possible, concerning the costs and benefits of revising the pipeline safety regulations to accommodate any of the changes suggested in this advance notice.

#### B. Executive Order 13132: Federalism

Executive Order 13132 requires agencies to assure meaningful and timely input by state and local officials in the development of regulatory policies that may have a substantial, direct effect on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. PHMSA is inviting comments on the effect a possible rulemaking adopting any of the amendments discussed in this document may have on the relationship between national government and the states.

#### C. Regulatory Flexibility Act

Under the Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq.*), we must consider whether a proposed rule would have a significant economic impact on a substantial number of small entities. “Small entities” include small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations under 50,000. If your business or organization is a small entity and if adoption of any of the amendments discussed in this ANPRM could have a significant economic impact on your operations, please submit a comment to explain how and to what extent your business or organization could be affected.

#### D. National Environmental Policy Act

The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to consider the consequences of Federal actions and that they prepare a detailed statement analyzing if the action significantly affects the quality of the human environment. Interested parties are invited to address the potential environmental impacts of this ANPRM. We are particularly interested

in comments about compliance measures that would provide greater benefit to the human environment or on alternative actions the agency could take that would provide beneficial impacts.

#### E. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175 requires agencies to assure meaningful and timely input from Indian tribal government representatives in the development of rules that “significantly or uniquely affect” Indian communities and that impose “substantial and direct compliance costs” on such communities. We invite Indian tribal governments to provide comments on any aspect of this ANPRM that may affect Indian communities.

#### F. Paperwork Reduction Act

Under 5 CFR Part 1320, PHMSA analyzes any paperwork burdens if any information collection will be required by a rulemaking. We invite comment on the need for any collection of information and paperwork burdens, if any.

#### G. Privacy Act Statement

Anyone can search the electronic form of comments received in response to any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). DOT’s complete Privacy Act Statement was published in the **Federal Register** on April 11, 2000 (65 FR 19477).

**Authority:** 49 U.S.C. 60101 *et seq.*; 49 CFR 1.53.

Issued in Washington, DC, on October 8, 2010.

**Jeffrey D. Wiese,**

*Associate Administrator for Pipeline Safety.*

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## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

#### 50 CFR Part 622

[Docket No. 100803319-0475-01]

RIN 0648-BA04

#### Fisheries of the Caribbean, Gulf of Mexico, and South Atlantic; Reef Fish Fishery of the Gulf of Mexico; Red Grouper Management Measures

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and