

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

[Docket No. RSPA-00-7408; Amdt. No. 195-76]

RIN 2137-AD49

**Pipeline Safety: Pipeline Integrity Management in High Consequence Areas (Hazardous Liquid Operators With Less Than 500 Miles of Pipelines)****AGENCY:** Research and Special Programs Administration (RSPA), U.S.

Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** Our regulations for the transportation of hazardous liquids by pipeline require operators with 500 or more miles of regulated pipelines to establish a program for managing the integrity of pipelines that affect high consequence areas. The regulations require continual assessment and evaluation of pipeline integrity through inspection or testing, data integration and analysis, and follow-up remedial, preventive, and mitigative actions. This Final Rule extends those regulations to operators with less than 500 miles of regulated pipelines. We are taking this action because safety recommendations, statutory mandates, and accident analyses indicate that coordinated risk control measures are needed for public safety and environmental protection in addition to compliance with traditional safety standards. Broadening the coverage of the existing regulations will further enhance the protection of high consequence areas against the risk of pipeline failures.

**DATES:** This Final Rule takes effect February 15, 2002.

**FOR FURTHER INFORMATION CONTACT:** L. M. Furrow by phone at 202-366-4559, by fax at 202-366-4566, by mail at U.S. Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590, or by e-mail at [buck.furrow@rspa.dot.gov](mailto:buck.furrow@rspa.dot.gov).

**SUPPLEMENTARY INFORMATION:****Background**

Last year we amended the regulations in 49 CFR part 195 to require each operator who owns or operates 500 or more miles of pipelines subject to part 195 to establish a program for managing the integrity of pipelines that could affect a high consequence area if a leak or rupture occurs (Docket No. RSPA-99-6355; 65 FR 75377; Dec. 1, 2000). High consequence areas include highly

populated areas, areas unusually sensitive to environmental damage, and commercially navigable waterways (§ 195.450). Program standards require continual assessment, evaluation, correction, and validation of pipeline integrity (§ 195.452 and appendix C to part 195). The new standards took effect May 29, 2001 (66 FR 9532; Feb. 8, 2001). In addition, in a further rulemaking action (Docket No. RSPA-99-6355), we are revising the repair provisions of § 195.452(h) and clarifying that § 195.452 applies to carbon dioxide pipelines as well as hazardous liquid pipelines.

We did not apply the new program standards to pipelines of operators with less than 500 miles of regulated pipelines primarily because we needed more information about the potential impact of the standards on these operators. We subsequently learned that these operators include, to a large extent, companies with ample resources and capabilities to carry out the standards.

A wide range of persons who submitted comments to Docket No. RSPA-99-6355 supported the need to apply the new program standards to all operators of regulated pipelines that could affect high consequence areas. Based on these comments and the impact information we had collected, we published a Notice of Proposed Rulemaking (NPRM) to extend the program standards to pipelines of operators with less than 500 miles of regulated pipelines (66 FR 15821; March 21, 2001).

The NPRM did not propose any substantive change to the existing program standards. It merely proposed to establish later deadlines for developing programs under § 195.452(b)(1), identifying pipelines under § 195.452(b)(1)(i), completing baseline assessments under § 195.452(d)(1), accepting prior assessments under § 195.452(b)(2), and applying certain time limits on reviewing assessment results under § 195.452(h)(3). We invited interested persons to submit written comments on the proposed rules until May 21, 2001.

Although the NPRM proposed no substantive change to the program standards, in the earlier proceeding (Docket No. RSPA-99-6355), we invited comments until March 31, 2001, on the substance of the standard for remedial action (§ 195.452(h)). As indicated in the NPRM, if § 195.452(h) is changed in that proceeding, the changes will apply to all operators of pipelines to which the program standards apply, including operators covered by the present Final Rule.

**Disposition of Comments**

This section of the preamble summarizes written comments we received in response to the NPRM. It also describes how we treated those comments in developing the final rules. However, comments related to costs and benefits and the impact of the proposed rules on small entities are addressed in the "Regulatory Analyses and Notices" section of this preamble. If a proposed rule is not mentioned, no significant comments were received on the proposal, and we are adopting the proposed rule as final.

Eight persons submitted comments: a professional organization, the American Society of Safety Engineers (ASSE); a state pipeline safety agency, the Washington Utilities and Transportation Commission (WUTC); a Washington State advisory committee, the Citizens Advisory Committee on Pipeline Safety (CAC); the Small Business Administration (SBA); the Department of Energy (DOE); an engineering firm, Wink, Incorporated (Wink); and two pipeline operators, the Laclede Pipeline Company (Laclede) and the Tosco Corporation (Tosco). ASSE did not comment on specific proposals in the NPRM, but strongly supported our goal of assuring the integrity of pipeline systems. ASSE also said improving pipeline safety would improve the United States' competitive position in the world economy. WUTC, CAC, Tosco, and DOE expressed general support for the NPRM but, along with Wink, suggested changes. DOE also commented on the costs of the proposed rules in their impact on small entities. Laclede opposed the integrity assessment proposal and took issue with our estimate of compliance costs. SBA's comments were limited to the impact of the proposed rules on small entities.

Under proposed §§ 195.452(b)(1) and (b)(1)(i), operators with less than 500 miles of pipelines would have 9 months after the effective date of the final rules to identify all pipeline segments that could affect high consequence areas. They would have 1 year after the effective date to develop a written integrity management program that addresses the risks of those segments. Tosco said the identification of pipeline segments should occur after, not before, integrity management programs are completed, and suggested we allow operators 1 year to complete the identifications. In considering this comment, we noted that operators with 500 or more miles of pipelines have not indicated they expect any significant difficulties in meeting the 9-month identification rule. Tosco's comment

does not give us reason to believe the 9-month rule might be too burdensome for operators with less than 500 miles of pipelines. While Tosco is correct that operators will need to have relevant program elements in place to guide them in identifying pipeline segments, we believe 9 months is enough time to complete those elements and to carry out the identifications. The additional 3 months the existing rule provides for program development gives operators enough time to complete program elements other than those concerning identification. We do not think this additional time is also needed to identify pipeline segments.

CAC suggested we require operators to seek input from potentially affected communities in identifying high consequence areas. CAC believed the input would help operators identify areas of population at risk and areas of economic importance. Although we recognize community input is valuable in many situations involving pipelines, particularly in site selection and emergency response, we do not feel it is necessary to mandate that operators seek the input CAC envisioned for two reasons. First, the definition of "high consequence area" in § 195.450 covers CAC's concern about the population-at-risk. That definition refers to areas of high or concentrated population that the U.S. Census Bureau has defined and delineated. Operators should be able to identify these areas quite easily using Census Bureau data. If additional information is needed from community records to complete the identifications, the proposed rule would implicitly obligate operators to seek this information, making an explicit requirement unnecessary. Secondly, the NPRM did not propose to require integrity management of pipelines that could affect areas of economic significance other than commercially navigable waterways. These waterways, which operators also can readily identify without community input, arguably are the nation's foremost economic resources potentially at risk from pipeline spills. Other significant economic resources that may be affected by pipelines are less certain, and we feel the present regulations in Part 195 provide those resources adequate protection against the risk of pipeline spills. Similarly, in directing DOT to require additional inspection of certain pipelines, Congress did not include pipelines that affect economic resources other than commercially navigable waterways (49 U.S.C. 60102(f)(2) and 60109). If in the future there is a need to apply the integrity management rules

to pipelines affecting other significant economic resources, we will consider whether operators should seek community input in identifying those resources.

Although we did not adopt CAC's recommendations, it is important to note that in a separate proceeding we are considering the need for regulations on better communication of pipeline information by operators to local officials and the public. We have formed a communications work team, consisting of representatives from environmental and public safety organizations, pipeline companies, and government to aid our own hazardous liquid pipeline safety advisory committee in examining communications issues. Notices of meetings of the work group are published in the **Federal Register**, and minutes of the meetings are posted on this Web site: <http://ops.dot.gov>.

WUTC suggested we require baseline integrity assessments of new pipelines as soon after they are constructed as possible, and for existing pipelines as soon as practicable after the final rules take effect. WUTC stated that early baseline assessment would provide the best basis for comparing subsequent assessment results. The NPRM proposed, in § 195.452(d), that operators with less than 500 miles of pipeline complete baseline assessments within 7 years after the effective date of the final rule, with half the line pipe, selected by risk, assessed within 42 months after the effective date. Alternatively, operators could use as a baseline assessment any qualified integrity assessment completed within the 5 years prior to the effective date. For newly constructed pipelines, hydrostatic testing completed as required by other regulations in Part 195 will fulfill the baseline assessment requirement. Since this testing is normally part of the construction process, it should meet WUTC's objective of early assessment. For existing pipelines, we proposed 7 years to complete baseline assessments because of the volume of assessments, the limited availability of in-line inspection tools, and the time needed to schedule pressure testing to minimize service disruptions. Although we agree with WUTC that earlier baseline assessment would be beneficial, we do not think requiring earlier baseline assessments would be reasonable under present circumstances.

To assure that only qualified persons develop integrity management programs and make program decisions, Wink suggested we require operators to use registered professional engineers with demonstrated technical pipeline

expertise and experience. Wink further suggested we require operators to submit their integrity management programs for review by RSPA certified entities. We did not adopt either suggestion because to do so would go beyond the scope of the NPRM. While § 195.452(f)(8) requires operators to use persons qualified to evaluate assessment results and analyze information, the NPRM did not address specific qualifications or program review by certified entities. Based on our experience in other areas of pipeline regulation, we believe operators will use qualified engineers with pipeline experience to assist in developing integrity management programs and recommend critical decisions under the programs. Moreover, persons carrying out regulated assessment and mitigation activities on pipelines are subject to the existing qualification requirements in Subpart G of Part 195. To assure that operators carry out their programs in accordance with the rules, we will use our own engineers and technical specialists to evaluate operators' programs and require changes that may be needed for safety. This type of evaluative process has been satisfactory for other programs and plans required by Part 195. We prefer to continue this approach to assure the quality of integrity management programs rather than establish additional personnel qualifications or a new federal certification program.

Wink asked to what extent operators would have to consider potential terrorist activities in their ongoing assessments of pipeline integrity. Under one of the integrity management program requirements (§ 195.452(e)(1)), operators must schedule integrity assessments based on "all risk factors that reflect the risk conditions on the pipeline." Therefore, if an operator knows or it is reasonable to anticipate that there is a threat to the integrity of the pipeline from terrorist activity, the operator must consider that risk in developing its integrity program. Since the events of September 11, 2001, we are working with DOT, the Department of Energy, the Federal Energy Regulatory Commission, and State agencies, to consider the need for minimum security standards for critical facilities.

Wink postulated that construction permit timing could interfere with an operator's ability to meet remediation deadlines. Section 195.452(h) deals with this potential problem. Under this rule, if justifiable circumstances preclude an operator from meeting specified repair deadlines, the operator may reasonably extend the repair schedule if it

temporarily reduces operating pressure to a safe level or notifies us of the delay in making a permanent repair.

Finally, Wink suggested we establish a program review process in which operators would meet with our technical specialists to examine whether the program meets applicable requirements. In response to Wink's first comment, we mentioned we will use our own engineers and technical specialists to evaluate operators' programs and require changes that may be needed for safety. We expect this review process will involve meeting with operators' representatives.

Laclede, who operates a 28-mile propane pipeline serving a gas distribution system, believed it would be unreasonable to apply the proposed integrity assessment requirement (§ 195.452(c)) to its pipeline. Laclede said the design of 70 percent of its pipeline cannot accommodate internal inspection tools, and difficulties in de-watering the line after hydrostatic testing would cause control valve and instrument freeze-ups during critical cold weather periods. Laclede suggested we exempt from internal inspection or hydrostatic testing requirements all pipelines directly serving gas distribution systems if the pipeline is cathodically protected and inspected according to our standards or is equipped with emergency flow restricting or shutdown devices. We did not adopt this comment because providing adequate cathodic protection and meeting current inspection requirements cannot assure a pipeline is free from all potentially harmful defects that internal inspection or hydrostatic testing can disclose, such as mechanical damage or fatigue cracks. Also, while emergency flow restricting or shutdown devices are useful in mitigating the consequences of a pipeline rupture, these devices do nothing to prevent ruptures, which is the purpose of periodic internal inspection or hydrostatic testing. Laclede's comment did not fully explain the particular difficulties in de-watering, or drying, its pipeline after hydrostatic testing. Drying pipelines is not an uncommon problem in the industry and not one we believe makes the proposed testing rule unreasonable. Many companies are available to provide expert drying services, using techniques that depend on operating conditions. However, if an operator's circumstances are so unusual that hydrostatic testing would result in unavoidable damage to pipeline facilities and internal inspection is not a viable alternative, the operator may apply for a waiver of the testing

requirement as permitted by 49 U.S.C. 60118.

DOE was concerned that construction of new pipelines within the next few years to meet the growing demand for fossil fuels could tax available technical expertise and equipment needed to meet various assessment deadlines in the existing and proposed rules. DOE said available resources could be stretched to a point where meeting the deadlines would not be possible, or at least not possible without significantly increased costs. Therefore, DOE suggested we expand the present provisions for extending deadlines (*e.g.*, § 195.452(j)(4)) to include situations in which meeting a deadline would result in supply disruptions. We agree that by shifting resources away from new construction or shutting down vital pipelines for hydrostatic testing or repair, supply disruptions could occur. However, at this stage we believe the impact of such an eventuality is too speculative to warrant changing the rules to add supply disruption as an acceptable reason for extending deadlines. Also, over the next few years new technologies might become available that would enable acceptable integrity assessments with no effect on supply. If in the future a supply problem appears more likely, the operator involved may petition us for necessary relief or latitude under the rules.

DOE also commented on our plan to identify high consequence areas on its National Pipeline Mapping System (NPMS) and to make the information available to the public via the Internet. DOE recommended that before implementing this plan, we fully evaluate issues of critical infrastructure protection. Indeed, we designed the NPMS with infrastructure protection issues in mind. For example, to avoid creating a tool for intentional misuse of information with tragic results, critical pipeline components and operating data would not be shown on the NPMS. However, the events of September 11, 2001, have caused even greater concern about the security of critical infrastructure systems. As a result, the NPMS no longer provides open access to pipeline-related data. These data are only available to pipeline operators and local, state, and federal government officials. More information on the availability of data and how operators and officials can access it is on the NPMS home page: <http://www.npms.rspa.dot.gov>.

#### Editing Changes

In a further rulemaking action (Docket No. RSPA-99-6355), we are revising

§ 195.452(h)(3) to eliminate the possibility that periods specified for reviewing integrity assessment results could cause confusion. This change to § 195.452(h)(3) eliminates the need to revise that section to cover operators with less than 500 miles of regulated pipelines. Therefore, this Final Rule does not include the NPRM's proposed change to § 195.452(h)(3).

Because this Final Rule extends the coverage of existing § 195.452 to all operators subject to part 195, there is no need to state in final § 195.452 which operators are subject to § 195.452. Therefore, we edited § 195.452(a) to describe which pipelines are covered by § 195.452 by moving relevant provisions in § 195.452(b)(1) to § 195.452(a). Section 195.452(a) now provides that § 195.452 applies to hazardous liquid and carbon dioxide pipelines that could affect a high consequence area, including pipelines located in a high consequence area unless a risk assessment effectively shows the pipeline could not affect the area.

The NPRM proposed certain compliance dates for covered pipelines that depend on whether the operator of the pipeline owns or operates 500 or more miles of regulated pipelines. Although no one commented on this approach to determining compliance dates, we now recognize the approach could have unintended results. Under the proposed approach, if the miles of regulated pipelines an operator owns or operates changes during the compliance period (through transfer, construction, or abandonment of pipelines), the compliance dates applicable to that operator's covered pipelines could also change. For example, if an operator currently subject to § 195.452 were to reduce its miles of regulated pipelines below 500 during a compliance period for covered pipelines, the operator's covered pipelines would then fall under the later compliance date applicable to operators with less than 500 miles of regulated pipelines. Likewise, covered pipelines of operators who increase their miles of regulated pipelines to 500 or more during a compliance period would become subject to earlier compliance dates. The purpose of the proposed approach to determining compliance dates was merely to establish compliance dates for pipelines covered by the NPRM that are later than the existing compliance dates in § 195.452. We did not intend that the existing or proposed compliance dates change with changes in an operator's regulated pipeline mileage. Rather, we intended to apply the existing and proposed compliance dates to covered pipelines existing on May 29, 2001 (the

effective date of existing § 195.452), depending on whether, on that date, the operator owned or operated 500 or more miles of regulated pipelines.

To clarify the application of compliance dates and to eliminate repetitive wording, final § 195.452(a) divides covered pipelines into three categories. The first category includes pipelines existing on May 29, 2001, that were owned or operated by an operator who owned or operated a total of 500 or more miles of pipeline subject to part 195. This category of pipelines is subject to the existing compliance dates in § 195.452, and will remain subject to those dates regardless of how many miles of regulated pipelines the present or future operator of the pipelines owns or operates after May 29, 2001. The second category includes pipelines existing on May 29, 2001, that were owned or operated on that date by an operator who owned or operated less than 500 miles of pipeline subject to part 195. This category of pipelines is subject to the later compliance dates proposed in the NPRM for operators with less than 500 miles of regulated pipelines. Like the first category, the compliance dates applicable to the second category of pipelines do not depend on how many miles of regulated pipelines the present or future operator of the pipelines owns or operates after May 29, 2001. The third category of covered pipelines includes pipelines constructed or converted after May 29, 2001. Because these pipelines are not subject to the existing or proposed compliance dates, we have added appropriate dates to §§ 195.452(b)(1), (b)(2)(i), (d)(1), and (h)(3). The dates in paragraphs (b)(1) and (h)(3) provide compliance periods equivalent to periods allowed for Category 1 or 2 pipelines. In paragraph (b)(2)(i), we set the date as the date the pipeline begins operation, because operators should not need any longer time to identify a new or converted pipeline as a covered pipeline. The date the pipeline begins operation is also the compliance date in paragraph (d)(1), because the hydrostatic test part 195 requires on new and converted pipelines before operation will serve as the baseline assessment.

#### Advisory Committee Consideration

We presented the NPRM for consideration by the Technical Hazardous Liquid Pipeline Safety Standards Committee (THLPSSC) at a meeting in Washington, DC on August 13, 2001 (66 FR 35505; July 5, 2001). The THLPSSC is RSPA's statutory advisory committee for hazardous liquid pipeline safety. The committee has 15

members, representing industry, government, and the public. Each member is qualified to consider the technical feasibility, reasonableness, cost-effectiveness, and practicability of proposed pipeline safety standards. The committee voted unanimously to approve the rules proposed in the NPRM and the associated evaluation of costs and benefits. A transcript of the August 13 meeting is available in Docket No. RSPA-98-4470.

#### Regulatory Analyses and Notices

##### *Executive Order 12866 and DOT Regulatory Policies and Procedures*

We consider this Final Rule to be a non-significant regulatory action under section 3(f) of Executive Order 12866 (58 FR 51735; October 4, 1993). Therefore, the Office of Management and Budget (OMB) has not received a copy of this rulemaking to review. We do not consider this rulemaking to be significant under DOT regulatory policies and procedures (44 FR 11034; Feb. 26, 1979).

This section of the preamble summarizes the findings of the Regulatory Evaluation we prepared for this Final Rule. A copy of the Regulatory Evaluation is in the docket.

Pipeline spills can adversely affect human health and the environment. However, the magnitude of this impact differs from area to area. There are some areas in which the impact of a spill will be more significant than it would be in others due to concentrations of people who could be affected or to the presence of environmental resources that are unusually sensitive to damage. Because of the potential for dire consequences of pipeline failures in certain areas, these areas merit a higher level of protection. We are promulgating this Final Rule to afford the necessary additional protection to these high consequence areas.

Last year we established 49 CFR 195.450 and 195.452, which are new requirements for additional protection of populated areas, commercially navigable waterways, and areas unusually sensitive to environmental damage from pipeline spills (65 FR 75377; Dec. 1, 2000). The new requirements apply to pipeline operators who own or operate 500 or more miles of pipeline. This Final Rule extends the same requirements, with modified compliance deadlines, to the remaining operators of regulated pipelines—those that own or operate less than 500 miles of regulated pipeline.

RSPA and the National Transportation Safety Board (NTSB) have conducted many investigations

that have highlighted the importance of protecting the public and environmentally sensitive areas from pipeline failures. NTSB has made several recommendations to ensure the integrity of pipelines near populated and environmentally sensitive areas. These recommendations include requiring periodic testing and inspection to identify corrosion and other damage, establishing criteria to determine appropriate intervals for inspections and tests, determining hazards to public safety from electric resistance welded pipe, and requiring installation of automatic or remotely-operated mainline valves on high-pressure lines to provide for rapid shutdown of failed pipelines.

Congress also directed DOT to undertake additional pipeline safety measures in areas of potentially high consequence. These statutory requirements call for new regulations on identifying pipelines in high density population areas, unusually sensitive environmental areas, and commercially navigable waters. They also call for new regulations on periodic inspections of pipelines in these areas with internal inspection devices, and on emergency flow restricting devices.

This Final Rule requires operators to systematically manage pipeline integrity to reduce the potential for failures that could affect high consequence areas (populated areas, unusually sensitive areas, and commercially navigable waterways). Operators must develop and follow an integrity management program to identify pipeline segments that could affect high consequence areas, and continually assess, through internal inspection, pressure testing, or equivalent alternative technology, the integrity of those segments. The program must also evaluate the segments through comprehensive information analysis, remediate integrity problems, and provide additional protection through preventive and mitigative measures, including the use of emergency flow restricting devices.

Existing §§ 195.450 and 195.452 cover an estimated 86.7 percent of the 157,000 miles of regulated hazardous liquid pipeline in the U.S. This Final Rule covers the remaining 13.3 percent. Of this percentage, we estimate this Final Rule will impact approximately 5,440 miles of pipeline. We estimate the cost to operators to develop the necessary programs at approximately \$9.94 million, with an additional annual cost for program upkeep and reporting of \$1.32 million. An operator's program begins with a baseline assessment plan and a framework that addresses each

required program element. The framework indicates how decisions will be made to implement each element. As decisions are made and operators evaluate the effectiveness of the program in protecting high consequence areas, the program will be updated and improved, as needed.

This Final Rule requires a baseline assessment of covered pipeline segments through internal inspection, pressure test, or use of other technology capable of equivalent performance. The baseline assessment must be completed within 7 years after this Final Rule goes into effect. After this baseline assessment, the rule further requires that operators periodically reassess and evaluate pipeline segments to ensure their integrity within a 5-year interval. We estimate the cost of periodic reassessment will generally not occur until the sixth year, unless the baseline assessment indicates significant defects that would require earlier reassessment. Integrating information related to the pipeline's integrity is a key element of the integrity management program. Costs will be incurred in realigning existing data systems to permit integration and in analysis of the integrated data by knowledgeable pipeline safety professionals. The total costs for the information integration requirements in this Final Rule are \$6.6 million in the first year and \$3.3 million annually thereafter.

This Final Rule requires operators to identify and take preventive or mitigative actions that would enhance public safety or environmental protection, based on a risk analysis of the pipeline segment. One preventive or mitigative action involves installing an emergency flow restricting device on the pipeline segment, if determined necessary. We could not estimate the total cost of installing emergency flow restricting devices because we do not know how many operators will install them. Another action involves evaluating leak detection capability and modifying that capability, if necessary. We do not know how many operators currently have leak detection systems or how many systems will be installed or upgraded as a result of this Final Rule. Therefore, we are unable to estimate the total costs of the leak detection requirements.

As a result of this Final Rule, we expect operators will assess more line pipe than they otherwise would assess. Integrity assessment consists of a baseline assessment, to be conducted within 7 years after the effective date of the final rule, and subsequent reassessment at intervals not to exceed every 5 years. We estimate the cost of

additional baseline assessments at approximately \$377,000 a year, and the cost of additional reassessments at approximately \$531,000 a year. Cost impact will be greater in the sixth and seventh years after the effective date of the final rule due to an overlap between baseline inspection and the initial subsequent inspection. The additional costs in these two years are estimated at \$5.26 million.

We cannot easily quantify the benefits of this Final Rule, but we can describe them qualitatively. Issuance of this Final Rule ensures that all operators will perform at least to a baseline safety level and will contribute to an overall higher level of safety and environmental performance nationwide.

The Final Rule will lead to greater uniformity in how risk is evaluated and addressed. It will also provide more clarity in discussions by government, industry and the public about safety and environmental issues, and how the issues can be resolved.

Section 195.452 is written using a performance-based approach. This approach has several advantages. First, it encourages development and use of new technologies. Secondly, it supports operators' development of more formal, structured risk-based programs. Thirdly, it supports continual evaluation of the programs by RSPA and state inspectors. And lastly, it provides greater opportunity for operators to customize their long-term maintenance programs.

Section 195.452 has stimulated the pipeline industry to develop its own consensus standard using a risk-based approach to integrity management. The rule has further fostered development of industry-wide technical standards, such as repair criteria to use following an internal inspection.

The Final Rule encourages a balanced program, addressing the range of prevention and mitigation needs and avoiding reliance on any single tool or overemphasis on any single cause of failure. A balanced program will lead to addressing the most significant risks in populated areas, unusually sensitive environmental areas, and commercially navigable waterways, thus improving industry performance in these areas.

The Final Rule requires a verification process that gives RSPA and state inspectors an opportunity to influence the methods of assessment and the interpretation of results. Government monitoring of the adequacy and implementation of this process should expedite the operators' rates of remedial action and reduce the public's exposure to risk.

A particularly significant benefit of this Final Rule involves the information

that operators will gather to support decisions. Two essential elements of the integrity management program are the continual assessment and evaluation of pipeline integrity using inspection and testing technology, and the integration and analysis of all available information about the pipeline. The processes of planning, assessment, and evaluation will provide operators with better data to use in determining a pipeline's condition and the location of potential problems that must be addressed. Also, government inspectors will be able to focus on potential risks and consequences that require greater scrutiny and the need for more intensive preventive and mitigation measures.

The public has expressed concern about the danger pipelines may pose to their neighborhoods. The integrity management process leads to greater accountability to the public for both operators and DOT. This accountability is enhanced through our choice of a map-based approach to defining the areas most in need of additional protection—a visual depiction of pipelines in relation to populated areas, unusually sensitive environmental areas, and commercially navigable waterways. The system integrity requirements will assure the public that operators are continually inspecting and evaluating the threats to pipelines that pass through or close to populated areas.

We have not estimated quantitative benefits for the continual integrity management evaluation required by this Final Rule. We do not believe, however, that requiring this comprehensive process, including the reassessment of pipelines every 5 years, will be an undue burden on operators. We believe the added security this assessment will provide and the generally expedited rate of strengthening the pipeline system in high consequence areas are benefit enough to promulgate these requirements.

Laclede commented that we grossly underestimated implementation costs. Laclede notes that our estimate of the cost for all affected operators is \$9.64 million, whereas Laclede expects itself to incur costs in excess of \$1 million to modify its pipeline. Laclede's estimated costs are to replace piping that can not now be inspected with internal inspection devices. The rule does not require such pipe replacement, and costs for such replacement therefore were not included in the implementation cost estimate. The rule allows use of hydrostatic testing as an alternative to internal inspection. Laclede's replacement of piping to allow passage of internal inspection devices, if

undertaken, would be an operational choice based on the company's conclusion that internal inspection would be a better method of assessment than hydrostatic testing. Operators are free to make such operational choices, but they are not required by the rule, and costs associated with pipe replacement are not, therefore, a cost of implementing the rule. We fully considered the costs of hydrostatic testing in the Regulatory Evaluation.

DOE expressed concern that costs associated with shutdown time during assessment or with obtaining permits to conduct repair activities may not have been included in the Regulatory Evaluation. DOE also thought per-mile cost estimates may not be appropriate for operators with only a few miles of pipe. With respect to the impact on small entities, DOE thought the requirements could have an unreasonable impact in some cases.

The values we used to estimate costs for internal inspection and hydrostatic testing were based on detailed studies of both methods that considered all relevant costs. The outcome of those studies are per-mile estimates for conducting assessments. We recognize that costs may be higher for operators that have only a few miles of pipeline, and for whom "fixed" costs of assessment would be amortized over just a few miles. However, we are unable to estimate how many operators may be so affected. Many of the operators subject to this Final Rule are parts of larger companies, as described further in response to Small Business Administration comments, and should not be so affected. We will work with operators who may be unusually impacted, each of whom may request a waiver from particular requirements.

While costs for permitting associated with conducting assessments were included, permitting costs associated with repairs were not estimated. No repair costs were included in the Regulatory Evaluation. This rule does impose time limits on the repair of certain types of defects. Generally, however, repair of conditions that could adversely affect the safe operation of a pipeline is already required by 49 CFR 195.401 and so is not a new requirement in this rule.

#### *Regulatory Flexibility Act*

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), we must consider whether a rulemaking would have a significant impact on a substantial number of small entities. This Final Rule covers only those operators that own or operate less than 500 miles of regulated pipeline. Because of this

limitation, only 132 hazardous liquid pipeline operators, covering 13.3 percent of regulated hazardous liquid pipelines, are covered by the Final Rule.

The risks of operating pipelines are similar regardless of the size of the operating company. Accordingly, the need to protect against those risks is also similar, regardless of operator size. We agree with WUTC's comment that "[t]he integrity of the hazardous liquid infrastructure that runs beneath our nation's cities, and crosses our public and private lands, should not be treated differently depending on the amount of pipeline owned or operated by pipeline companies."

We established an artificial cutoff criterion of 500 miles specifically so that we could review further the potential impact and safety needs of smaller operators to see if different treatment was needed. We completed our review and concluded that different treatment was not needed. By this Final Rule, we are establishing the same integrity management requirements for operators with less than 500 miles of pipelines as we established previously for operators with more pipeline mileage. Extending the existing requirements to the remaining operators of regulated pipelines is necessary to ensure the integrity of pipelines which could, if damaged or ruptured, cause significant injury to public safety and the environment.

We preliminarily concluded that there is no disproportionate impact on small businesses, principally because the risks are the same. We examined the companies that operate less than 500 miles of pipelines. A few of these operators are "small businesses" (less than 1500 employees, the Small Business Administration's criterion for defining a small business in the hazardous liquid pipeline industry.) The majority, however, is not. The majority includes larger companies or divisions or subsidiaries of very large national and multi-national companies.

We estimate that 132 operators are potentially subject to the requirements of this Final Rule, because that is the number of operators who paid user fees on less than 500 miles of pipeline in the last fiscal year. This number is a conservative upper bound. Some of these operators are not, in fact, affected by this rulemaking. As noted above, many are divisions or subsidiaries of larger companies. In many cases, the parent companies have other divisions or subsidiaries that operate pipelines and, when all are considered, own or operate more than 500 miles of such pipeline. Those companies, including all their divisions and subsidiaries

which may, themselves, operate less than 500 miles of pipeline, are covered by existing § 195.452 and not by this Final Rule. In addition, this Final Rule only covers pipeline segments that could affect a high consequence area. It is possible that some operators, particularly those with only a few miles of pipe, may not operate any segments that could affect such areas. If so, those operators would not be covered by this Final Rule. Nevertheless, we continue to estimate costs on the basis of 132 covered companies, in order to provide a conservative estimate.

SBA thought the NPRM's discussion of the Regulatory Flexibility Act was inadequate. The discussion did not include background and basis information that was in the previous rulemaking applicable to operators with 500 or more miles of regulated pipeline. However, in the present document we have improved our discussion of Regulatory Flexibility Act issues to describe more clearly the basis for concluding that this Final Rule does not disproportionately affect small businesses. SBA's comments are also discussed in detail in the final Regulatory Evaluation, included in the docket.

Therefore, based on the facts available about the anticipated impacts of this rulemaking, I certify, pursuant to section 605 of the Regulatory Flexibility Act (5 U.S.C. 605), that this Final Rule will not have a significant impact on a substantial number of small entities.

#### *Paperwork Reduction Act*

This Final Rule contains information collection requirements. As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), we have submitted a copy of the Paperwork Reduction Act Analysis to the OMB for review. The name of the information collection is "Pipeline Integrity Management in High Consequence Areas for Operators with less than 500 miles of pipeline." The purpose of this information collection is designed to require operators of pipelines to develop a program to provide direct integrity testing and evaluation of pipelines in high consequence areas.

No comment submitted in response to the NPRM addressed the information collection requirements.

One hundred and thirty-two operators of hazardous liquid pipelines will be potentially subject to this Final Rule. We estimate that those operators will have to develop integrity management programs taking approximately 2,800 hours per program. Each of the operators will also have to devote 1,000 hours in the first year to integrate data

into current management information systems.

Additionally, under this Final Rule, operators will have to update their integrity management programs on a continual basis. We estimate updates will take approximately 330 hours per program, annually. An additional 500 hours per operator is estimated for the requirement to annually integrate data into the operator's current management information systems.

Under the Final Rule, operators may use either hydrostatic testing or an internal inspection tool as a method to assess their pipelines. However, operators may use another technology if they can demonstrate it provides an equivalent understanding of the condition of the line pipe as the other two assessment methods. Operators have to provide RSPA 90-days notice (by mail or facsimile) before using the other technology. We believe that few operators will choose this option. If they do choose an alternative technology, notice preparation should take approximately 1 hour. Because we believe few if any operators will elect to use other technologies, the burden was considered minimal and therefore not calculated.

Additionally, the Final Rule allows operators in particular situations to vary from the 5-year continual reassessment interval or repair schedule if they can provide the necessary justification and supporting documentation. Advance notice would have to be provided to RSPA if an operator does so. The advance notification can be in the form of letter or fax. We believe the burden of a letter or fax is minimal and therefore did not add it to the overall burden hours discussed above.

Organizations and individuals desiring to submit comments on the information collection should direct them to: The Office of Management and Budget, Office of Information and Regulatory Affairs, ATTN: RSPA Desk Officer, 727 Jackson Place, NW, Washington, DC 20503. Please provide the docket number of this action. Comments must be sent within 30 days of the publication of this Final Rule.

OMB is specifically interested in the following issues concerning the information collection:

1. Evaluating whether the collection is necessary for the proper performance of the functions of DOT, including whether the information would have a practical use;
2. Evaluating the accuracy of DOT's estimate of the burden of the collection of information, including the validity of assumptions used;

3. Enhancing the quality, usefulness and clarity of the information to be collected; and minimizing the burden of collection of information on those who are to respond, including through the use of appropriate automated electronic, mechanical, or other technological collection techniques or other forms of information technology; e.g., permitting electronic submission of responses.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless a valid OMB control number is displayed. The OMB control number for this information collection is 2137-0605.

#### *Executive Order 13084*

This Final Rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13084 ("Consultation and Coordination with Indian Tribal Governments"). Because this proposed rule does not significantly or uniquely affect the communities of the Indian tribal governments and does not impose substantial direct compliance costs, the funding and consultation requirements of Executive Order 13084 do not apply.

#### *Executive Order 13132*

This Final Rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 ("Federalism"). This Final Rule does not adopt any regulation that: (1) Has substantial direct effects on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government; (2) imposes substantial direct compliance costs on state and local governments; or (3) preempts state law. Therefore, the consultation and funding requirements of Executive Order 13132 (64 FR 43255, Aug. 10, 1999) do not apply. In a public meeting we held on November 18-19, 1999, we invited the National Association of Pipeline Safety Representatives (NAPSR), which includes State pipeline safety regulators, to participate in a general discussion on pipeline integrity. Again in January, and February 2000, we held conference calls with NAPSR, to receive its input before proposing an integrity management rule.

#### *Impact on Business Processes and Computer Systems*

We do not want to impose new requirements that would mandate business process changes when the resources necessary to implement those requirements would otherwise be applied to "Y2K" or related computer

problems. This Final Rule does not mandate business process changes or require modifications to computer systems. Because the final rules will not affect the ability of organizations to respond to those problems, we are not delaying the effectiveness of the requirements.

#### *Unfunded Mandates Reform Act of 1995*

This Final Rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of \$100 million or more to either state, local, or tribal governments, in the aggregate, or to the private sector, and is the least burdensome alternative that achieves the objective of the NPRM.

#### *National Environmental Policy Act*

We have analyzed the Final Rule in accordance with section 102(2)(c) of the National Environmental Policy Act (42 U.S.C. 4332), the Council on Environmental Quality regulations (40 CFR parts 1500-1508), and DOT Order 5610.1D. We have determined that this action will not significantly affect the quality of the human environment.

The Environmental Assessment (available in the Docket) determined that the combined impacts of the initial baseline assessment (pressure testing or internal inspection), the subsequent periodic assessments, and additional preventive and mitigative measures that may be implemented to protect high consequence areas will result in positive environmental impacts. The number of incidents and the environmental damage from failures in and near high consequence areas are likely to be reduced. However, from a national perspective, the impact is not expected to be significant for the pipeline operators covered by the Final Rule. The following discussion summarizes the analysis provided in the Environmental Assessment.

Many operators covered by the Final Rule (those operating less than 500 miles of regulated pipeline) already have internal inspection and pressure testing programs that cover most, if not all, of their pipeline systems. These operators typically place a high priority on the pipeline's proximity to populated areas, commercially navigable waterways, and environmental resources when making decisions about where and when to inspect and test pipelines. As a result, some high consequence areas have already been recently assessed, and a large fraction of remaining locations would probably have been assessed in the next several years without the Final Rule. The most tangible impact will be to ensure



assessments are performed for those line segments that could affect a high consequence area that are not currently being internally inspected or pressure tested, and ensuring that integrity is maintained through an integrity management program that requires periodic assessments in these locations. Because hazardous liquid pipeline failure rates are low, and because the total pipeline mileage operated by operators with less than 500 miles of pipeline that could affect high consequence areas is small, the Final Rule has only a small effect on the likelihood of pipeline failure in these locations.

The Final Rule will result in more frequent integrity assessments of line segments that could affect high consequence areas than most operators are currently conducting (due to the 5-year interval required for periodic assessment). However, if the operator identifies and repairs significant problems discovered during the baseline inspection, and has in place solid risk controls to prevent corrosion and other threats, as they must, the benefits of assessing every 5 years versus the longer intervals operators more typically employ are not expected to be significant.

The Final Rule requires operators to conduct an integrated evaluation of all potential threats to pipeline integrity, and to consider and take preventive or mitigative risk control measures to provide enhanced protection. If there is a vulnerability to a particular failure cause, like third-party damage, these evaluations should identify additional risk controls to address these threats. Some operators covered by the Final Rule already perform integrity evaluations or formal risk assessments that consider the environmental sensitivity and impacts on population. These evaluations have already led to additional risk controls beyond existing requirements to improve protection for these locations. For these operators, it is expected that additional risk controls will be limited and customized to site-specific conditions that the operator may not have previously recognized.

Finally, an important, although less tangible, benefit of the Final Rule will be to establish requirements for operator integrity management programs that assure a more comprehensive and integrated evaluation of pipeline system integrity in high consequence areas. In effect, this will codify and bring an appropriate level of uniformity to the integrity management programs some operators are currently implementing. It will also require operators who have limited, or no, integrity management

programs to raise their level of performance.

We expect this Final Rule to provide a more consistent, and overall, a higher level of protection for high consequence areas across the nation. Even though there is a benefit, we have concluded that it is not significant, and, therefore, have issued a finding of no significant impact.

*Executive Order 13211*

This rulemaking is not a "Significant energy action" under Executive Order 13211. It is not a significant regulatory action under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, this rulemaking has not been designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action.

**List of Subjects in 49 CFR Part 195**

Carbon dioxide, Petroleum, Pipeline safety, Reporting and recordkeeping requirements.

In consideration of the foregoing, we are amending 49 CFR part 195 as follows:

**PART 195—TRANSPORTATION OF HAZARDOUS LIQUIDS BY PIPELINE**

1. The authority citation for part 195 continues to read as follows:

**Authority:** 49 U.S.C. 5103, 60102, 60104, 60108, 60109, 60118; and 49 CFR 1.53.

**Subpart F—Operation and Maintenance**

2. In § 195.452, paragraphs (a), (b), (d) heading, (d)(1), and (d)(2) are revised and paragraph (d) introductory text is added to read as follows:

**§ 195.452 Pipeline integrity management in high consequence areas.**

(a) *Which pipelines are covered by this section?* This section applies to each hazardous liquid pipeline and carbon dioxide pipeline that could affect a high consequence area, including any pipeline located in a high consequence area unless the operator effectively demonstrates by risk assessment that the pipeline could not affect the area. (Appendix C of this part provides guidance on determining if a pipeline could affect a high consequence area.) Covered pipelines are categorized as follows:

(1) Category 1 includes pipelines existing on May 29, 2001, that were owned or operated by an operator who owned or operated a total of 500 or more miles of pipeline subject to this part.

(2) Category 2 includes pipelines existing on May 29, 2001, that were owned or operated by an operator who owned or operated less than 500 miles of pipeline subject to this part.

(3) Category 3 includes pipelines constructed or converted after May 29, 2001.

(b) *What program and practices must operators use to manage pipeline integrity?* Each operator of a pipeline covered by this section must:

(1) Develop a written integrity management program that addresses the risks on each segment of pipeline in the first column of the following table not later than the date in the second column:

Pipeline	Date
Category 1 .....	March 31, 2002.
Category 2 .....	February 18, 2003.
Category 3 .....	1 year after the date the pipeline begins operation.

(2) Include in the program an identification of each pipeline or pipeline segment in the first column of the following table not later than the date in the second column:

Pipeline	Date
Category 1 .....	December 31, 2001.
Category 2 .....	November 18, 2002.
Category 3 .....	Date the pipeline begins operation.

(3) Include in the program a plan to carry out baseline assessments of line pipe as required by paragraph (c) of this section.

(4) Include in the program a framework that—

(i) Addresses each element of the integrity management program under paragraph (f) of this section, including continual integrity assessment and evaluation under paragraph (j) of this section; and

(ii) Initially indicates how decisions will be made to implement each element.

(5) Implement and follow the program.

(6) Follow recognized industry practices in carrying out this section, unless—

(i) This section specifies otherwise; or

(ii) The operator demonstrates that an alternative practice is supported by a reliable engineering evaluation and provides an equivalent level of public safety and environmental protection.

\* \* \* \* \*



(d) *When must operators complete baseline assessments?* Operators must

complete baseline assessments as follows:

(1) *Time periods.* Complete assessments before the following deadlines:

If the pipeline is:	Then complete baseline assessments not later than the following date according to a schedule that prioritizes assessments:	And assess at least 50 percent of the line pipe on an expedited basis, beginning with the highest risk pipe, not later than:
Category 1 .....	March 31, 2008 .....	September 30, 2004.
Category 2 .....	February 17, 2009 .....	August 16, 2005.
Category 3 .....	Date the pipeline begins operation .....	Not applicable.

(2) *Prior assessment.* To satisfy the requirements of paragraph (c)(1)(i) of this section for pipelines in the first column of the following table, operators may use integrity assessments conducted after the date in the second column, if the integrity assessment method complies with this section. However, if an operator uses this prior

assessment as its baseline assessment, the operator must reassess the line pipe according to paragraph (j)(3) of this section. The table follows:

Pipeline	Date
Category 1 .....	January 1, 1996.
Category 2 .....	December 18, 2006.

\* \* \* \* \*

Issued in Washington, DC, on January 8, 2002.

**Ellen G. Engleman,**  
*Administrator.*

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