THE PIPELINE SAFETY IMPROVEMENT ACT OF 2002

*By Theresa I. Zolet and Susan A. Moore**

I. INTRODUCTION

On December 17, 2002, President George W. Bush signed into law the *Pipeline Safety Improvement Act of 2002* (Act).[1] Pipeline safety was the one piece of energy legislation with enough momentum to emerge from the otherwise unsuccessful efforts of the 107th Congress to enact a comprehensive energy bill. The impetus behind the successful passage of pipeline safety legislation stemmed from several factors. First, congressional outrage had not abated in response to recent fatal pipeline accidents, in particular, the 1999 gasoline pipeline explosion in Bellingham, Washington, which killed three people, and the 2000 natural gas pipeline explosion in Carlsbad, New Mexico, which killed ten. Second, reports issued by the General Accounting Office (GAO)[2] and the Inspector General's Office[3] had questioned the Department of Transportation's Office of Pipeline Safety's (OPS)[4] inspection and enforcement policies, and criticized the agency's pace of compliance with congressional mandates and responsiveness to pipeline safety recommendations of the National Transportation Safety Board (NTSB).[5] Finally, the September 11 terrorist attacks heightened concern about protecting the nation's energy infrastructure, including pipelines, which carry economically critical products through densely

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1. Pipeline Safety Improvement Act of 2002, Pub. L. No. 107-355 (Dec. 17, 2002) (to be codified at 49 U.S.C. §§ 6103-6107 and 60104-60133) [hereinafter Pipeline Safety Improvement Act of 2002].

2. UNITED STATES GEN. ACCOUNTING OFFICE, PIPELINE SAFETY: THE OFFICE OF PIPELINE SAFETY IS CHANGING HOW IT OVERSEES THE PIPELINE INDUSTRY, GAO/RCED-00-128 at 28-29, 33-34 (May 2000) [hereinafter 2000 GAO REPORT]; U.S. GEN. ACCOUNTING OFFICE, PIPELINE SAFETY: PROGRESS MADE, BUT SIGNIFICANT REQUIREMENTS AND RECOMMENDATIONS NOT YET COMPLETE, GAO-01-1075 at 5, 9 (Sept. 2001) [hereinafter 2001 GAO REPORT]; U.S. GEN. ACCOUNTING OFFICE, GAO-02-517T, PIPELINE SAFETY: STATUS OF IMPROVING OVERSIGHT OF THE PIPELINE INDUSTRY, GAO-02-517T at 9-10 (Mar. 2002) [hereinafter 2002 GAO REPORT].

3. OFFICE OF INSPECTOR GENERAL, AUDIT REPORT: PIPELINE SAFETY PROGRAM, RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION, RT-2000-069 (Mar. 13, 2000) [hereinafter 2000 INSPECTOR GENERAL'S REPORT].

4. The Department of Transportation (DOT) is the federal agency charged with implementing and enforcing pipeline safety standards. DOT has delegated this authority to the Research and Special Programs Administration (RSPA). 49 C.F.R. § 1.53(a) (2002). The OPS, located within RSPA, executes these implementation and enforcement functions.

5. The NTSB does not have regulatory authority related to pipeline safety, but instead investigates transportation accidents, including significant pipeline accidents. On the basis of its investigations, the NTSB issues recommendations to the OPS and other federal agencies designed to prevent future accidents. Department of Transportation Act, Pub. L. No. 89-670, 80 Stat. 931 (1966) (codified, as amended, at 49 U.S.C. §§ 1101-55 (2000)).

populated areas.[6]

In enacting the 2002 Act, Congress wanted to ensure implementation and enforcement of pipeline safety requirements and compliance with congressional mandates.[7] The Act strengthens existing pipeline safety laws by tightening federal inspection and safety requirements[8] and enhances the OPS' enforcement authority. The statute also imposes numerous deadlines for actions by pipeline owners and operators, the Secretary of Transportation (Secretary), and other federal agencies. Many of these deadlines are quite ambitious, requiring various agencies to undertake extensive studies and to take significant actions within two years from the date of enactment. Another notable feature of the Act is that pipelines must implement certain measures, such as implementing comprehensive risk assessment measures and pipeline integrity management programs that meet the criteria established in the Act, whether or not the DOT promulgates implementing regulations. Thus, Congress intends that regulatory delay will not slow the industry's compliance with the Act's mandates.[9]

This article describes the major issues addressed by the Act and deadlines for certain actions. This article also describes ongoing OPS initiatives that dovetail with the Act's requirements, as well as the OPS' recently proposed regulations that would require gas pipeline operators to undertake comprehensive assessments of their facilities and to implement integrity management programs.[10] In order to assist pipelines with the compliance requirements of the Act, a detailed chart containing a description of the regulatory deadlines included in the Act, as well as a description of certain existing OPS initiatives that are related to the Act's requirements, is attached as an Appendix.

II. REPORTS OF THE GAO AND INSPECTOR GENERAL

As noted above, fatal pipeline accidents were a major impetus to passage of

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6. H.R. 3929, 107th Cong. § 4 (2002).

7. *See generally* Pipeline Safety Improvement Act of 2002, *supra* note 1, at § 18. As described in this article, however, in the last several years, the OPS has taken actions to strengthen pipeline safety requirements.

8. The existing Pipeline Safety Act is codified at 49 U.S.C. §§ 60101-60128 (2000). The Act and existing pipeline safety requirements apply to pipeline facilities transporting natural gas or hazardous liquids (petroleum or petroleum products) in interstate commerce. The requirements also apply to intrastate pipelines and local distribution companies, but are administered by the states to the extent that state regulations satisfy federal standards. Gathering facilities in populated areas also are covered. In addition, federal safety requirements apply to liquefied natural gas (LNG) facilities. The Act, however, does not affect existing laws covering these facilities. For a discussion of jurisdictional issues under the Pipeline Safety Act, *see generally* Jim Behnke, *Safety Jurisdiction Over Natural Gas Pipelines*, 19 ENERGY L. J. 71 (1998).

9. Congress has adopted similar provisions to require statutory compliance in the absence of implementing regulations. *See generally* 42 U.S.C. § 7412(j)(2) (2002) (requiring operators of certain stationary sources of hazardous air pollutants to submit emissions permit applications, regardless of whether the Administrator promulgated emission standards.); *see also* 15 U.S.C. § 2644 (2002) (requiring that, if the Environmental Protection Agency (EPA) did not promulgate implementing regulations for asbestos inspections and response actions, compliance with the statute should be accomplished in accordance with the EPA's most current guidelines).

10. Notice of Proposed Rulemaking, *Pipeline Safety: Pipeline Integrity Management in High Consequence Areas (Gas Transmission Pipelines)*, 68 Fed. Reg. 4,278 (Jan. 28, 2003) (to be codified at 49 C.F.R. pt. 192). Comments on the OPS' proposed rules were due March 31, 2003.

the Act. The statute also reflected Congress' response to questions and concerns about the federal pipeline safety program that were raised in reports published by the GAO and Inspector General's Office following the gasoline pipeline explosion in Bellingham, Washington. Both reports found, among other things, that the OPS had not implemented certain congressional mandates, in particular, those requiring periodic pipeline inspections and the use of safety valves, and requiring the OPS to establish criteria for identifying pipeline facilities located in highly populated areas.[11] In addition, the OPS had not adopted certain pipeline safety measures recommended by the NTSB as a result of its investigations of various pipeline accidents.[12] Among the recommendations contained in the Inspector General's report was that the OPS seek to finalize congressionally mandated actions and to comply with NTSB recommendations.[13] The GAO Report contained similar recommendations.[14]

The GAO also observed that, since 1990, the OPS had adopted an enforcement approach that reduced the use of fines and increased reliance on compliance orders requiring specific corrective actions. The OPS also increasingly relied on warning letters and letters of concern to notify pipelines of probable violations of safety regulations, and to inform pipelines of best practices.[15] According to the GAO report, the OPS preferred this approach because it allowed the agency to work constructively with pipelines to address problems. With respect to inspections, the GAO noted that the OPS had shifted to "systemwide" inspections, instead of conducting local "unit" inspections. This approach resulted in reduced reliance on state inspectors.[16]

The GAO expressed concern about the OPS' shift in inspection and enforcement approaches, and recommended that the OPS work with state officials to determine how greater state involvement could enhance federal pipeline safety activities. In addition, the GAO recommended state involvement in the OPS' integrity management programs when they were implemented. Finally, the GAO recommended that the DOT evaluate the effectiveness of reducing reliance on fines as an enforcement tool.

A subsequent GAO report noted greater state involvement in pipeline inspections and increased use of fines. In addition, the GAO acknowledged the OPS' progress in adopting integrity management programs and other risk management initiatives.[17] While the GAO said it was encouraged that the OPS had made some progress in addressing outstanding NTSB recommendations and with complying with statutory mandates, it concluded that the "OPS faces major challenges in implementing its initiatives and in fulfilling the Safety Board's

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11. 2000 GAO REPORT, *supra* note 2, at 33-35, 55. 2000 INSPECTOR GENERAL'S REPORT, *supra* note 3, at 8-12.

12. 2000 GAO REPORT, *supra* note 2, at 28-33. 2000 INSPECTOR GENERAL'S REPORT, *supra* note 3, at 20-21.

13. 2000 INSPECTOR GENERAL'S REPORT, *supra* note 3, at 22.

14. 2000 GAO REPORT, *supra* note 2, at 34-36.

15. *Id.* at 26-28.

16. 2000 GAO REPORT, *supra* note 2, at 22-26.

17. 2002 GAO REPORT, *supra* note 2, at 5-9.

recommendations and statutory requirements."[18]

Several provisions of the Act specifically address issues identified in the reports of the GAO and Inspector General. For example, the statute requires the Secretary to report on the status of the OPS' response to NTSB recommendations and to the recommendations of the Inspector General's 2000 report. The Comptroller General is required to evaluate and prepare a report to Congress regarding the OPS' enforcement polices and procedures and the extent to which the Secretary has complied with the March 2000 GAO Report. In addition, as described below, the Act imposes significant compliance requirements on the industry, the OPS, and other federal agencies.

III. SIGNIFICANT REQUIREMENTS OF THE PIPELINE SAFETY IMPROVEMENT ACT OF 2002

A. Risk Analysis and Integrity Management Programs for Gas Pipelines.

One of the most significant and far-reaching provisions of the Act is the requirement that owners and operators of gas pipelines implement comprehensive risk assessment and integrity management programs. Specifically, the Act amends 49 U.S.C. § 60109 to require operators of gas pipelines to analyze the risks to their pipeline facilities located in "high density areas" (HDAs). These are more densely populated areas located near pipelines where the potential effects of a failure could have significant impacts. Each pipeline must then adopt and implement written integrity management programs for all facilities located in HDAs in order to reduce the risks identified during the analysis.

The Act requires that, by December 17, 2003, the Secretary must issue regulations establishing standards to govern gas pipeline operators'[19] (1) analyses of the risks affecting pipeline facilities located in HDAs, and (2) adoption and implementation of written integrity management programs to reduce identified risks associated with facilities located in HDAs. The Secretary's regulations must require pipeline operators to analyze the risks associated with their respective pipeline facilities and to adopt integrity-management programs by December 17, 2004. In addition, the statute requires pipelines to begin their individual baseline integrity assessments by June 17, 2004. The Act also sets forth minimum requirements for pipelines' integrity management programs.

Irrespective of whether the DOT promulgates final standards for pipelines' risk assessments and integrity-management programs, pipeline operators must conduct these analyses for their facilities located in HDAs and adopt written integrity management programs containing the minimum requirements set forth in the Act within twenty-four months following enactment (*i.e.*, by December 17, 2004). These minimum program requirements include completion of baseline integrity assessments of pipelines located within HDAs within ten years

18. *Id.* at 3.

19. The term "gas pipeline operators" means operators of gas transmission pipelines, including those who transport petroleum gas, hydrogen, or other gas products.

of enactment, with assessments for 50% of such facilities completed within the first five years. Assessments of facilities with the highest risk must be completed first. In addition, the Act requires that integrity management programs: (1) provide for periodic facility reassessments every seven years; (2) clearly define criteria for evaluating results of assessments and reassessments; (3) include a method for conducting continuing analyses that integrate all available information about the facilities' integrity and consequences of releases; (4) describe actions the operator will take to promptly address any integrity issue raised while evaluating assessments and conducting ongoing analyses; (5) describe measures to prevent and mitigate consequences of releases; (6) provide methods for monitoring cathodic protection systems throughout the pipeline system; and (7) describe actions to be taken to address any safety concerns raised by the Secretary or by states or local authorities.

The integrity management requirements of the Act build on the existing provision of the Pipeline Safety Act, which requires the Secretary to prescribe standards establishing criteria for identifying natural gas pipeline facilities (except for distribution lines) located in HDAs.[20] In compliance with that section, in August 2002, the OPS issued a final rule in which it defined the term "high consequence areas" (HCAs). These are areas "where the potential consequences of a gas pipeline accident may be significant or may do considerable harm to people and their property"[21] and include areas that would also be considered HDAs.

In its final rule defining HCAs, the OPS explained that existing regulations already require natural gas pipeline operators to maintain data on population density for the purpose of determining class locations for pipeline facilities.[22] In developing its HCA definition, the OPS explained that it decided to incorporate this existing population density data by defining Class 3 and Class 4 locations, which include more densely populated areas, as HCAs. In addition, the OPS included within HCAs those areas where a pipeline is located specified distances from other "identified sites," such as facilities with persons who are mobility-impaired, confined, or hard to evacuate, and locations where people are known to congregate. In all of these types of areas, the potential consequences of an

20. This requirement originally was enacted in the Pipeline Safety Act of 1992, 49 U.S.C. § 60109. The Secretary also was directed to establish additional safety inspections standards for these areas. Pipeline Safety Act of 1992, Pub. L. No. 102-508, §§ 102, 103, 106 Stat. 3289, 3290-91 (codified at 49 U.S.C. § 1672) (natural gas pipelines), and §§ 202, 203, 106 Stat. 3289, 3300-01 (codified at 49 U.S.C. § 2002) (hazard liquids pipelines). In addition, the Pipeline Safety Reauthorization Act of 1988 required the Secretary to establish standards for pipelines to identify, inventory, and map their pipeline facilities. Pipeline Safety Reauthorization Act of 1988, Pub. L. No. 100-561, § 102, 102 Stat. 2805, 2806 (codified at 49 U.S.C. § 1672).

21. Final Rulemaking, *Pipeline Safety: High Consequence Areas for Gas Transmission Pipelines*, 67 Fed. Reg. 50,824 (Aug. 6, 2002) (to be codified at 49 C.F.R. pt. 192). The OPS explained that the final rule satisfied congressional requirements set forth in 49 U.S.C. § 60109(a) (requiring criteria for identifying gas and hazardous liquid pipelines), 60102(f) (2) (requiring inspections of pipelines identified in section 60109), and 60102(j) (requiring assessments of emergency flow restricting devices, remotely controlled valves and other procedures, equipment and systems used to detect and locate ruptures and minimize releases). *Id.*

22. *Id.* at 50,826. Class location definitions are contained in the OPS' existing regulations. 49 C.F.R. § 192.5 (2002).

explosion could be the greatest.[23] Thus, the definition of HCAs covers populated areas, including areas that would be considered HDAs under the Act.

Defining HCAs was the first step of a two-step process OPS has undertaken to develop integrity management program requirements for natural gas pipelines. The OPS next plans to establish regulatory requirements designed to improve the integrity of gas transmission facilities located in HCAs. On January 28, 2003, The OPS issued its proposed rule to require pipeline operators to develop integrity management programs for gas transmission pipelines that could affect HCAs in the event of a failure.[24] The OPS previously issued integrity management regulations for hazardous liquids pipelines.[25]

B. Pipeline Qualification Programs.

The Act strengthens existing requirements that pipeline operators develop and implement qualification programs to ensure that individuals who perform pipeline facility operation and maintenance tasks affecting the operation or integrity of pipeline facilities subject to the DOT's jurisdiction are qualified to conduct such tasks.

The Act requires that, within one year of the date of enactment, the Secretary must establish standards and criteria for pipeline employee qualification programs.[26] The Secretary also must require each pipeline operator to develop and adopt a qualification program that complies with such standards and criteria within two years. The Act requires each pipeline's operator qualification program to contain provisions for examining or testing, training, qualifying and requalifying individuals. The Act also requires that qualification of all individuals must be completed within eighteen months of a pipeline's adoption of a qualification program. The Secretary must review each pipeline operator's qualification program and verify compliance with the Act's established standards and criteria. Those reviews must be completed within three years of the date of enactment.

As with pipeline risk assessment and integrity management programs, each pipeline operator must develop and adopt a qualification program that complies with the requirements of the Act, regardless of whether the Secretary prescribes

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23. 67 Fed. Reg. 50,824, at 50,835.

24. Notice of Proposed Rulemaking, *Pipeline Safety: Pipeline Integrity Management in High Consequence Areas (Gas Transmission Pipelines)*, 68 Fed. Reg. 4,278 (Jan. 28, 2003) (to be codified at 49 C.F.R. pt. 192). Under the OPS' proposal, gas pipeline operators would be required to conduct comprehensive evaluations of their pipeline systems, and to take measures designed to protect those segments located in HCAs. Comments on the proposed rule were due on March 31, 2003. A summary of the proposed rule is found in Section IV, *infra.*

25. 49 C.F.R. §§ 195.450-52, & App. C. *See generally* Final Rulemaking, *Pipeline Safety: Pipeline Integrity Management in High Consequence Areas (Hazardous Liquid Operators With 500 or More Miles of Pipeline)*, 65 Fed. Reg. 75,378 (Dec. 1, 2000) (codified at 49 C.F.R. pt. 195); Notice of Proposed Rulemaking, *Pipeline Safety: Pipeline Integrity Management in High Consequence Areas (Hazardous Liquid Operators With Less Than 500 Miles of Pipeline)*, 66 Fed. Reg. 15,821 (Mar. 21, 2001) (codified at 49 C.F.R. pt. 195). The OPS did not issue these regulations until almost ten years after passage of the 1992 Act.

26. In 1999, the OPS implemented operator qualification requirements. Final Rulemaking, *Pipeline Safety: Qualification of Pipeline Personnel*, 64 Fed. Reg. 46,853 (Aug. 27, 1999) (codified at 49 C.F.R. pts. 192, 195). The OPS' regulations are performance-based, and do not include prescriptive standards and criteria.

standards and criteria for pipeline operator qualification programs. Pipelines must comply with the Act's requirements within two years of enactment. Within four years of the date of enactment, the Secretary must submit a report to Congress describing the status and results of the operator qualification requirement.

Finally, within three years of enactment, the Secretary must develop additional tests and other certification requirements for individuals who operate computer-based systems designed to control and monitor pipeline operations. The Secretary also must establish and implement a pilot program for three different pipeline facilities.

Under the pilot program, individuals who operate computer-based systems for controlling pipeline operations must be certified. In its required report to Congress on the operator qualification requirements, the Secretary also must report on the results of the pilot program. That report must: (1) describe the pilot program and its implementation at three pipeline facilities; (2) evaluate the pilot program, including the effectiveness of the process for certifying individuals who operate computer-based systems for controlling pipeline operations; (3) include any recommendations for requiring such certifications; and (4) assess the ramification of requiring certification of other individuals performing "safety-sensitive functions" for a pipeline facility.

C. Penalties.

The Act increases the civil penalties the DOT may assess against a pipeline operator for safety violations from a maximum of $25,000 to $100,000 for each violation, and from $500,000 to $1,000,000 for a related series of violations. In addition, within one year of enactment, the Comptroller General must conduct a study of the Secretary's "actions, policies, and procedures . . . for assessing and collecting fines and penalties on operators of hazardous liquid and gas transmission pipelines." The Study also must examine whether the Secretary has complied with the 2000 GAO Report. The Comptroller General must transmit its evaluation to the Senate Committee on Commerce, Science, and Transportation, the House Committee on Transportation and Infrastructure, and the House Committee on Energy and Commerce.

D. Coordination of Environmental Reviews.

To facilitate the streamlining of the environmental review process for certain pipeline repairs, the Act requires the President to establish an Interagency Committee consisting of representatives of federal agencies with responsibilities relating to pipeline repair projects.[27] The Chairman of the Council on Environmental Quality will lead the Interagency Committee. The mission of this Interagency Committee is to develop a coordinated environmental review and

27. Members of the Interagency Committee include the Secretary; the Administrator of Environmental Protection Agency, the Director of the United States Fish and Wildlife Service, the Assistant Administrator for Fisheries of the National Oceanic and Atmospheric Administration, the Director of the Bureau of Land Management, the Director of the Minerals Management Service, the Assistant Secretary of the Army for Civil Works, and the Chairman of the Federal Energy Regulatory Commission.

permitting process that enables pipeline operators to conduct any necessary pipeline repairs within time frames to be specified by the Secretary.

The Act requires the Interagency Committee to evaluate federal permitting requirements applicable to the access, excavation, and restoration practices the pipeline industry undertakes in connection with pipeline repairs. The Committee also may develop a compendium of best practices used by the industry to access, excavate, and restore the site of a pipeline repair. The Committee is required to consult with appropriate state and local environmental, pipeline safety, and emergency response officials, and other such officials as the Committee considers appropriate.

Based upon the Interagency Committee's evaluation of these pipeline practices, within one year of the date of enactment, the members of the Committee must enter into a memorandum of understanding to provide for a coordinated and expedited environmental permit review process for pipeline repairs. The memorandum of understanding is to be based on the Committee's evaluation of federal permitting requirements that apply to the access, excavation, and restoration activities undertaken in connection with pipeline repairs.

In addition, within eighteen months of the date of enactment, each agency represented on the Interagency Committee must revise its regulations as necessary to implement the provisions of the memorandum of understanding.

E. One-Call Notification Programs.

Third-party damage is the leading cause of pipeline accidents.[28] In an attempt to improve one-call notification programs[29] and to reduce third-party damage to pipelines, the DOT is required to "encourage" states, operators of such programs, excavators (including all government and contract excavators) and underground facility operators to adopt and implement certain "best practices" set forth in the "Common Ground" report sponsored by the DOT.[30] Furthermore, the DOT must establish a 3-digit nationwide toll-free telephone

28. *Reauthorization of the Natural Gas Pipeline Safety Act and the Hazardous Liquid Pipeline Safety Act: Hearing on H.R. 361-35 Before the Committee on Energy and Commerce*, 107th Cong. 20, 31-32 (2002) (testimony of Robert Chipkevich, and James D. Anderson, Nat'l Ass'n of Pipeline Safety Reps.).

29. "One-call" notification programs are designed to prevent damage to underground facilities, such as pipelines. "One-call" centers establish regional or statewide telephone numbers that excavators must call before digging. Upon receiving notification of a planned excavation, the one-call center notifies owners of other underground facilities of a planned excavation so that such operators can locate and mark their facilities.

30. UNITED STATES DEP'T OF TRANS., COMMON GROUND: STUDY OF ONE-CALL SYSTEMS AND DAMAGE PREVENTION BEST PRACTICES, TEA-99-21 (June 1999), *available at* http://ops.dot.gov/document/OCSS062199A.pdf (last visited Apr. 10, 2003). In May 2002, the OPS issued an advisory notice to operators of natural gas and hazardous liquid pipeline facilities reminding them of the importance of safe excavation practices, especially with the arrival of warmer weather. The notice requested pipeline operators to increase their vigilance on right-of-way inspections; review their procedures for following up on locate requests; ensure that operator and contract employees employ best practices; and increase outreach efforts to the excavator community during the spring season. The notice also requested the Common Ground Alliance, a new national non-profit damage prevention organization, and other organizations to help distribute the advisory. Notice to Operators of Natural Gas and Hazardous Liquid Pipelines To Encourage Continued Implementation of Safe Excavation Practices, Pipeline Safety: Protecting Buried Pipelines by Using Safe Excavation Practices, 67 Fed. Reg. 36,666 (May 24, 2002).

number to be used by state one-call notification systems.

F. Public Education Programs and Safety Information Grants.

The Act expands the requirements that pipeline operators establish continuing public education programs, specifically requiring that the public be educated on: (1) the use of the one-call notification system; (2) possible hazards from unintended releases from the pipeline facility; (3) the physical indications that such a release has occurred; and (4) what steps to take in the event of a release. Pipeline operators are required to modify their existing public education programs within one year of enactment and to submit them to the Secretary for review. Furthermore, the Act authorizes the DOT to issue grants, not to exceed $50,000, for "technical assistance," relating to the safety of pipeline facilities, to local communities and groups of individuals. The grants may not be used to fund lobbying or direct litigation efforts.

Even prior to passage of the Act, industry efforts to develop consensus standards for expanding pipelines' public awareness and education programs were underway, and the OPS has actively encouraged the public's involvement in these industry efforts. In particular, in May 2002, the OPS issued a notice describing how the public can participate in the process established by the American Petroleum Institute (API), the Interstate Natural Gas Association of America, the American Gas Association, and American Public Gas Association to develop standards for expanding pipelines' public awareness programs and "to further involve the local communities in ensuring pipeline safety."[31] The agency explained that API had developed revisions to its recommended practice with respect to public awareness, and that the American National Standards Institute (ANSI) will provide an opportunity for formal notice and comment on the revised Recommended Practice. The final document will become an ANSI Standard. In the notice, the OPS indicated that, after the industry finalizes the revision, the OPS will decide whether to adopt some or all of it as a regulatory requirement, pursuant to appropriate notice and comment procedures.

In addition, the OPS is working with the Common Ground Alliance to assist with public education at the national, state, and local levels, and to provide state and local officials with information and other tools to help residents live safely with pipelines and to become familiar with pipeline locations.[32]

G. Population Encroachment and Rights-of-Way.

The Act requires the DOT, in consultation with the Federal Energy Regulatory Commission and other appropriate federal agencies and state and local governments, to complete a study of land use practices, zoning ordinances, and rules regarding the preservation of environmental resources on or near pipeline rights-of-way. In addition, the Secretary must publish a report identifying practices, laws, and ordinances most successful in addressing issues

31. Notice of Development of Consensus Standards, *Pipeline Safety: Development of Consensus Standards on Pipeline Public Awareness Programs*, 67 Fed. Reg. 34,754 (May 15, 2002).

32. *See generally* Notice of Advisory Bulletin, *Pipeline Safety: Gas and Hazardous Liquid Pipeline Mapping*, 67 Fed. Reg. 40,768 (June 13, 2002).

of encroachment and maintenance on pipeline rights-of-way so as to more effectively protect public safety, pipeline workers, and the environment. This study and the Secretary's report must be completed within one year of the date of enactment.

H. Protection of Employees Providing Pipeline Safety Information.

The Act includes whistle-blower protection by prohibiting pipeline operators from firing or taking other adverse action against an employee for certain specified actions relating to pipeline safety, including providing information to the employer or federal government.

I. Pipeline Integrity, Safety, and Reliability R&D Program.

The Act requires the heads of the DOT, the Department of Energy, and the National Institute of Standards and Technology to establish a program of research, development, demonstration, and standardization activities to ensure the safety and integrity of pipeline facilities. Within one year, the Secretary must prepare and transmit to Congress a five-year program plan to guide the activities required under this section.

J. National Pipeline Mapping System.

Within six months of enactment, pipeline operators (except operators of distribution and gathering lines) are required to provide the DOT with information regarding the location of their pipeline facilities for use in the National Pipeline Mapping System (NPMS), a geographic information system database containing geographic information regarding the locations and selected attributes of hazardous liquid and natural gas transmission pipelines and other facilities operating in the United States. Pipeline operators must provide the following information with respect to the facility: (1) geospatial data for use in the NPMS, or in a format that can be readily converted to geospatial data;[33] (2) name and address of the person with primary operational control to be identified as its operator; and (3) a means for a member of the public to contact the operator for additional information about the pipeline facilities it operates.

The Act strengthens the OPS' current efforts to develop a national mapping system for use by federal and state pipeline inspectors by making participation by pipelines mandatory. The OPS' existing mapping initiative is voluntary and relies on pipeline operators to submit hard-copy or digital pipeline data.[34] According to the OPS, the natural gas pipelines industry has provided only 55 percent of the needed information.[35] On February 3, 2003, the OPS issued an advisory bulletin to owners and operators of natural gas transmission and hazardous liquid pipeline systems advising them of their obligations under the

33. Geospatial data is information that identifies the geographic location and other characteristics of natural or constructed features and boundaries on the earth.

34. Notice of the Availability of Operator and Repository Standards, *Pipeline Safety: National Pipeline Mapping System*, 66 Fed. Reg. 37,268 (July 17, 2001).

35. Pipeline Infrastructure Protection To Enhance Security and Safety Act, Pub. L. No. 107-355, 116 Stat. 2985 (July 23, 2002) (to be codified at 49 U.S.C. § 60101).

Act to provide geospatial and operator contact information and to update previously submitted information.[36]

K. Safety Orders.

If the DOT decides that a pipeline facility has a "potential safety-related condition," the Act authorizes the Secretary to order corrective action, including physical inspection, testing, repair, or replacement.

IV. OPS' PROPOSED REGULATIONS TO REQUIRE GAS PIPELINE OPERATORS TO DEVELOP INTEGRITY MANAGEMENT PROGRAMS

As mentioned above, on January 28, 2003, the OPS issued a notice of proposed rulemaking requiring gas pipeline operators to develop integrity management programs for transmission pipelines affecting high consequence areas in the event of pipeline failure. The proposed rule incorporates the requirements of the Act. Comments on the proposed rule are due on April 30, 2003, and the OPS has stated that it intends to issue the final rule by December 17, 2003.

A. The Purpose of the Proposed Rule.

The proposed rule is intended to ensure pipeline integrity by requiring owners and operators of gas transmission lines to: (1) implement comprehensive integrity management plans; (2) conduct baseline assessments and periodic reassessments to identify and evaluate potential threats to pipelines; (3) remedy significant defects discovered during these processes; and (4) continually monitor program effectiveness so that modifications can be recognized and implemented.

The proposed rule would apply to gas transmission pipelines, including those that transport petroleum gas, hydrogen, and other gas products. The proposed rule *would not* cover gas gathering lines or gas distribution lines.

B. Covered Pipeline Segments.

The proposal would require pipeline operators to develop written integrity management programs that address risks to each covered pipeline segment, *i.e.*, those segments that could affect an HCA in the event of a failure (Covered Segment). The OPS also proposed to broaden the previously adopted definition of HCAs. The OPS' existing regulations defines an HCA as any Class 3 or Class 4 location, or areas where a pipeline is located within a specified distance from an "identified site" (*e.g.*, facilities with persons who are mobility-impaired, confined, or hard to evacuate, such as hospitals, churches, schools, or prisons, and places where people gather for recreational or other purposes). The distances vary with a pipeline's diameter and operating pressure.

The proposed rule would expand this definition by including areas with a "threshold radius" (*i.e.*, an additional area of safety beyond the distance

36. Notice of Advisory Bulletin, *Pipeline Safety: Required Submission of Data to the National Pipeline Mapping System Under the Pipeline Safety Improvement Act of 2002*, 68 Fed. Reg. 5,338 (Feb. 3, 2003).

calculated as the potential impact radius) of 1,000 feet or larger that have a cluster of 20 or more buildings intended for human occupancy. However, the proposed rule would restrict the existing definition by excluding from HCAs Class 3 and Class 4 locations that are deemed "moderate risk" areas (*i.e.*, areas not within the "potential impact zone"). The OPS requested comments on its proposal to create moderate risk areas.

The OPS also is proposing new definitions based on specified mathematical equations, including "potential impact circle," "potential impact radius," "threshold radius," and "potential impact zone." These calculations are intended to enable an operator to determine the actual area within an HCA that likely would be affected by pipeline failure.

C. Requirements For Developing Integrity Management Programs.

The proposed rule would require gas pipeline operators to develop and follow written integrity management programs that address the risks on each Covered Segment within one year of the effective date of the final rule. This requirement is consistent with the requirement of the Act requiring gas pipeline owners and operators to develop integrity management programs prior to December 17, 2004, irrespective of whether the OPS promulgates implementing regulations. These integrity management programs, which must be kept on site for OPS inspection, must comply with extensive requirements set forth in the proposed rule, as well as in the ASME B31.8S Code.[37] The proposed rule allows operators to deviate from certain requirements, but only where an operator can demonstrate that it has an exceptional performance-based integrity management program, as specified in the proposed rule. The proposed rule further requires appropriate training for an operator's supervisory personnel over the integrity management program. Thus, within one year of implementation of the final rule,[38] each operator must do the following:

1. *Each operator must identify all HCAs and the potential impact zone within each HCA, as well as all moderate risk areas.*

2. *Each operator must develop a pipeline integrity management program addressing each of the fourteen required elements.* Specifically, integrity management programs must include: (1) identification of all Covered Segments and their accompanying "potential impact zones;" (2) a baseline assessment plan for Covered Segments; (3) identification of potential threats to Covered Segments, including a "risk assessment" to evaluate the failure likelihood of each Covered Segment; (4) a direct assessment plan, if applicable; (5) provisions for remedying conditions found during an integrity assessment; (6) a process for continual evaluation and assessment; (7) preventive and mitigative measures to protect HCAs; (8) performance measures to assess whether the integrity

37. American Society of Mechanical Engineers, MANAGING SYSTEM INTEGRITY OF GAS PIPELINES, SUPPLEMENT TO THE ASME CODE FOR PRESSURE PIPING B31.8S-2001 (2002). This ASME Standard is a supplement to B31.8S, ASME Code for Pressure Piping, Gas Transmission and Distribution Piping Systems. It describes the processes gas pipeline operators may use to develop integrity management programs.

38. As indicated previously, the OPS intends to issue a final rule by December 17, 2003, one year prior to the 2002 Act's requirement that pipeline's implement integrity management programs within twenty-four months of the date of enactment.

management program is effective; (9) record keeping requirements; (10) a management of change process; (11) a quality assurance process; (12) a communication plan, including a process for addressing safety concerns raised by the OPS; (13) a process for providing a copy of an operator's integrity management program to a State authority where the OPS has an interstate agent agreement; and (14) a process for ensuring that each integrity assessment is conducted in a manner that minimizes environmental and safety risks.

3. *Each operator must develop a baseline assessment plan.* Baseline assessment plans must identify: (1) segments to be assessed and threats for each segment; (2) methods selected to assess each pipeline segment; (3) the basis for selecting each assessment method; and (4) a schedule for completing the assessment. A pipeline operator also would be required to demonstrate that it is conducting the assessment in a manner that minimizes environmental and safety risks.

Regarding the identification of threats to each Covered Segment, potential threats that an operator must consider include, but are not limited to, the threats listed in ASME/ANSI B31.8S, section 2 and the following: (1) time dependent threats, such as internal corrosion, external corrosion, and stress corrosion cracking; (2) static or resident threats, such as fabrication or construction defects; (3) time dependent threats, such as third-party damage and outside-force damage; and (4) human error. An operator must gather and integrate data on the *entire* pipeline that could be relevant to the Covered Segment, including both on the Covered Segment and similar segments, information regarding past incident history, corrosion control records, continuing surveillance records, patrolling records, maintenance history, and all other conditions specific to each pipeline. An operator will use the risk assessment to prioritize the segments for baseline and continual re-assessments, and in determining what additional preventive and mitigative measures are needed.

The OPS proposes to permit operators to use one or a combination of four assessment methods: (1) internal inspection tools – inline and pig testing; (2) pressure tests; (3) direct assessments – a process that includes data gathering, indirect examination, direct examination, and post-assessment evaluation; or (4) other proven technologies. An operator must select the method or methods best suited to addressing the threats identified to each segment. Direct assessment is intended to be a supplemental method but may be a primary method where inline inspection and pressure testing are not possible or economically feasible, where customers would be substantially impacted from use of other methods, or where the pipeline segment operates at a low stress. Significantly, *if an operator intends to use direct assessment methods, it must develop direct assessment plans describing how they will be used.* The proposed rule describes several direct assessment methods and establishes extensive and complex requirements governing their use.

4. *As part of the Integrity Management Program, each operator must adopt a plan for continual integrity assessment and evaluation once the baseline assessment has been completed.*

5. *As part of the Integrity Management Program, each operator must develop processes for continually improving and developing its framework into*

an ongoing integrity management program. This should include methods to measure whether the program is effective in assessing and evaluating the integrity of each Covered Segment and in protecting the HCAs.

D. The Proposed Time Frame For Implementing A Baseline Assessment.

The proposed rule would require operators to complete baseline assessments within specified time frames that vary depending on the assessment method chosen by the operator. Operators must assess highest risk segments first. These time frames, which are consistent with those mandated in the 2002 Act, are as follows:

Method	Completion Date	Date by Which 50% of a Pipeline Must Be Assessed	Completion Date for Class 3 and 4 Moderate Risk Areas
Pressure test or internal inspection tool	12/17/2012	12/17/2007	12/17/2015
Direct Assessment	12/17/2009	12/17/2006	12/17/2012

If an area is newly identified as an HCA, an operator must include it in its baseline assessment within one year from the date of identification. The baseline assessment of any newly identified HCA must be completed within ten years (seven years if direct assessment is used) from that date.

E. Actions To Be Taken To Address Discovered Integrity Issues.

The proposed rule would require operators to take "prompt action" to address and remedy all "anomalous conditions" discovered through the assessment process. All conditions that could reduce a pipeline's integrity must be remedied. Operators would be required to determine the existence of a condition within 180 days of conducting an integrity assessment, except where impracticable. Except in the cases where the proposed rule requires a condition to be repaired immediately (in which case operating pressure must be temporarily reduced or the pipeline shut down until the operator completes repair of such conditions), and those conditions that require remedying within 180 days, operators are required to complete remedying of conditions pursuant to the schedule provided in ASME B31.8S.

F. Additional Preventive And Mitigative Measures Operators Must Take To Protect HCAs.

Each operator must adopt additional preventative and mitigative measures to prevent pipeline failure and to mitigate the consequences of pipeline failure in an HCA. Such measures will depend on the threats identified for each Covered Segment. The proposed rule provides that these measures include, but are not limited to, installation of automatic shut-off valves or remote control valves,

installation of computerized monitoring and leak detection systems, replacement of pipe segments with pipe of heavier wall thickness, provision of additional training to personnel on response procedures, conduct of drills with local emergency responders and implementation of additional extensive inspection and maintenance programs.

G. Continuing Requirements.

The proposed rule would require operators to continually evaluate and reassess Covered Segments as frequently as necessary to assure pipeline integrity. Operators are required to establish a schedule for reassessing Covered Segments, with minimum intervals of every seven years (but, if the specified calculations support a longer interval, the operator must conduct a "confirmatory direct assessment" of the segment within the seven year period and then conduct the scheduled reassessments at the interval determined by the calculations). The OPS is seeking comment with respect to whether longer reassessment periods are appropriate for low stress lines. An operator's integrity management program also must include methods for measuring whether it is effective in assessing and evaluating integrity of Covered Segments and in protecting HCAs. An operator's measures must include the four overall performance measures specified in ASME B31.8S. The proposed rule would require such performance measures to be accessible in real time to the OPS and state pipeline safety enforcement officials.

H. Record Keeping Requirements.

The proposed rule would require operators to maintain: (1) a written baseline assessment plan; (2) a written integrity management program; (3) documents to support the decisions, analyses, and processes developed to implement and evaluate the baseline assessment plan and the integrity management program; (4) documents that demonstrate that personnel have the required training, including a description of the training program; (5) documents necessary to carry out the requirements for a direct assessment plan, if applicable; and (6) documents demonstrating the integrity management plan has been provided to the interstate agent, and that any safety concerns raised by the OPS on behalf of an interstate agent have been addressed.

V. CONCLUSION.

With the passage of the Pipeline Safety Improvement Act of 2002, Congress has responded to the questions and concerns that were raised about the federal pipeline safety program. Congress has strengthened existing OPS initiatives, established substantial new requirements on the industry and the OPS that are accompanied by ambitious compliance deadlines and required pipeline operator compliance with statutory directives. Other federal agencies also face directives to assist in ensuring the safety and integrity of pipelines and to streamline environmental review processes that apply to certain repair activities. Clearly, the OPS, the pipeline industry and other federal agencies have their work cut out for them.

APPENDIX

REQUIRED ACTIONS AND DEADLINES UNDER THE PIPELINE SAFETY IMPROVEMENT ACT OF 2002

The Pipeline Safety Improvement Act of 2002 (Act), which was signed into law on December 17, 2002, includes numerous provisions that tighten federal inspection and safety requirements for natural gas or hazardous liquids pipeline facilities. Set forth below are three charts describing the actions that are required by pipeline owners and operators, the Secretary of Transportation (Secretary), and other federal agencies under the Act, as well as the deadline for each required action. Many of the statute's provisions build on existing statutory requirements (such as the requirement for integrity management programs for gas pipelines) and strengthen existing regulations of the Research and Special Programs Administration (RSPA) and the Office of Pipeline Safety (OPS), in particular, with respect to operator qualification programs, public education programs, national mapping system, and safe excavation practices/one-call programs.

I. DEADLINES APPLICABLE TO REQUIRED ACTIONS BY OWNERS & OPERATORS OF PIPELINE FACILITIES

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
Public Education Programs 49 U.S.C. § 60116[39]	No later than 12 months (December 17, 2003)	Each owner and operator of gas or hazardous liquid pipeline facilities must review the effectiveness of its existing public education program and modify it as necessary. The completed program shall (1) include activities to advise affected municipalities, school districts, businesses, and residents of pipeline facility locations; (2) be submitted to the Secretary or the appropriate State agency (if an intrastate pipeline); and (3) shall be reviewed periodically by the Secretary or State agency. The Secretary may issue standards prescribing the elements of an effective public education program and develop material for use in the program. Recent OPS Efforts Regarding Public Education: In May 2002, the OPS issued a notice providing information regarding how the pubic can participate in the process established by the American Petroleum Institute (API), the Interstate Natural Gas Association of America, the American Gas Association, and American Public Gas Association to develop consensus standards for expanding pipelines' public awareness programs and "to further involve the local communities in ensuring pipeline safety." Notice of Development of Consensus Standards, Pipeline Safety: Development of Consensus Standards on Pipeline Public Awareness Programs, 67 Fed. Reg. 34,754 (May 15, 2002). The API has developed recommended revisions to its Recommended Practice 1123, which would apply to

39. Pipeline Safety Act, 49 U.S.C. §§ 60101-60128 (2000).

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
		existing pipelines. In addition, the American National Standards Institute (ANSI) will provide an opportunity for formal notice and comment on the revised Recommended Practice. As a result of that process, the final document will become an ANSI Standard. According to the API, a revised Recommended Procedure, which will be RP 1162, should be approved by the ANSI in mid-2003. In its notice, the OPS indicated that, after industry finalizes the revision, the agency will decide whether to adopt some or all of it as a regulatory requirement, pursuant to appropriate notice and comment procedures. In addition, the OPS is working with the Common Ground Alliance to assist with public education at the national, state, and local levels, and to provide state and local officials with information and tools to help residents live safely with pipelines, and to become familiar with pipeline locations. *See generally* Notice of Advisory Bulletin, Pipeline Safety: Gas and Harzardous Liquid Pipeline Mapping, 67 Fed. Reg. 40,768 (June 13, 2002).
National Pipeline Mapping System 49 U.S.C. § 60132	No later than 6 months (June 17, 2003)	Operators of pipeline facilities (except distribution and gathering lines) shall provide the Secretary with the following information with respect to the facility: (1) geospatial data for use in the National Pipeline Mapping System (NPMS), or in a format that can be readily converted to geospatial data; (2) name and address of the person with primary operational control to be identified as its operator; and (3) a means for a member of the public to contact the operator for additional information about the pipeline facilities it operates. OPS Efforts Regarding NPMS: To develop a national mapping system for use by Federal and State pipeline inspectors, OPS finalized its NPMS operator and repository standards in 1999. *See generally* Notice of the Availability of Operator and Repository Standards, Pipeline Safety: Nat'l Pipeline Mapping System 66 Fed. Reg. 37,268 (July 17, 2001). The NPMS is a voluntary initiative that relies on pipeline operators to submit hard copy or digital pipeline data. "The NPMS . . . will contain locational information for all natural gas and hazardous liquids transmission pipelines operating in the United States. NPMS standards . . . describe how an operator should prepare and submit pipeline data and how the NPMS repositories will process and maintain the pipeline data." *Id.* There is a National Repository and 15 state repositories, which process state pipeline data. The National Repository processes pipeline data for states without a state repository and integrates national and state data. The NPMS will enable the OPS to "understand the relationship between pipelines and their environments, to plan effective pipeline inspection programs, to effectively respond to gas and hazardous liquid releases, and to quickly and accurately respond to requests for pipeline information." 66 Fed. Reg. 37,268. The NPMS also will provide a "community education tool that will enable local officials to make better planning and emergency response decisions." *Id.* In June 2002, the OPS issued an advisory bulletin to pipeline owners and operators recommending that they "review their information and mapping systems to ensure that the operator has clear, accurate, and useable information on the location and characteristics of all pipes, valves, regulators, and other pipeline elements for use in emergency response, pipe location and marking, and pre-construction planning. This includes ensuring that construction records, maps, and operating

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
		history are readily available to appropriate operating, maintenance, and emergency response personnel." Notice of Advisory Bulletin, Pipeline Safety: Gas and Hazardous Liquid Pipeline Mapping, 67 Fed. Reg. 40,768 (June 13, 2002). On February 3, 2003, the OPS issued an advisory bulletin to owners and operators of natural gas transmission and hazardous liquid pipeline systems advising them of their obligations under the 2002 Act to provide geospatial and operator contact information, and to update previously submitted information. Notice of Advisory Bulletin, Pipeline Safety: Required Submission of Data to the Nat'l Pipeline Mapping System Under the Pipeline Safety Improvements Act of 2002, 68 Fed Reg. 5,338 (Feb. 3, 2003).
Risk Analysis and Integrity Management Programs for Gas Pipelines 49 U.S.C. § 60109	No later than 12 months (December 17, 2003) No later than 24 months (December 17, 2004)	Each operator of a gas pipeline facility shall conduct an analysis of the risks to each facility of the operator located in high-density areas (HDA) and to adopt and implement written integrity management programs for such pipelines. The Secretary shall issue regulations prescribing standards to direct an operator's conduct of a risk analysis and adoption and implementation of an integrity management program for gas facilities located in HDAs. The regulations shall require an operator to conduct a risk analysis and adopt a written integrity management program within a time period prescribed by the Secretary, ending no later than twenty-four months after such date. No later than eighteen months after such date, each operator of a gas pipeline facility shall begin a baseline integrity assessment. (See below, Section II) If the Secretary does not issue regulations addressing the elements of an integrity management program, the operator of a pipeline facility shall conduct a risk analysis and adopt and implement an integrity management program no later than twenty-four months after the enactment date of this subsection. OPS' Integrity Management Initiatives: In August 2002, in compliance with existing 49 U.S.C. § 60109, requiring the Secretary to establish standards setting forth criteria for identifying natural gas pipeline facilities in HDAs, the OPS issued a final rule defining "high consequence areas" (HCA). HCAs are areas "where the potential consequences of a gas pipeline accident may be significant or may do considerable harm to people and their property." Final Rulemaking, Pipeline Safety: High Consequence Areas for Gas Transmission Pipelines, 67 Fed. Reg. 50,824 (Aug. 6, 2002) (to be codified at 49 C.F.R. pt. 192). The OPS noted that gas pipelines already collect and maintain population data regarding their systems, and included within HCAs Class 3 and Class 4 locations, which include more densely populated areas. *Id.* On January 28, 2003, the OPS issued a proposed rule to require pipeline operators to develop integrity management programs for gas transmission pipelines that could affect high consequence areas in the event of a failure. Under the OPS' proposal, gas pipeline operators would be required to conduct comprehensive evaluations of their pipeline systems, and to take measures designed to protect those segments located in HCAs. Comments on the proposed rule were due on March 31, 2003. Notice of Proposed Rulemaking, Pipeline Safety: Pipeline Integrity Management in High Consequence Areas

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
		(Gas Transmission Pipelines), 68 Fed. Reg. 4,278 (Jan. 28, 2003) (to be codified at 49 C.F.R. pt. 192). The OPS previously issued integrity management requirements for hazard liquid pipelines that can affect HCAs.
Risk Analysis and Integrity Management Programs for Gas Pipelines 49 U.S.C. § 60109	10 years (December 17, 2012) 5 years (December 17, 2007) Every 7 years thereafter	Each pipeline operator shall complete a baseline integrity assessment of each facility in HDAs. Each operator shall complete an assessment of at least 50% of such facilities. Each operator shall prioritize such facilities for assessment and ensure that assessments of facilities with the highest risks are given priority for completion and that such assessments are completed within five years. Pipeline operators shall conduct periodic reassessments of facilities located in HDAs at least once every seven years.
Verification of Pipeline Qualification Programs 49 U.S.C. § 60131	No later than 2 years (December 17, 2004)	Notwithstanding any failure of the Secretary to prescribe standards and criteria for pipeline qualification programs (see below, Section II), an operator of a pipeline facility shall develop and adopt a qualification program (to ensure that individuals who perform covered tasks are qualified to conduct them) that complies with the requirements of the Act.

II. DEADLINES APPLICABLE TO THE SECRETARY OF TRANSPORTATION FOR ISSUING REGULATIONS OR STANDARDS

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
Verification of Pipeline Qualification Programs 49 U.S.C. § 60131	No later than 2 years (December 17, 2004)	The Secretary shall require pipeline facility operators to develop and adopt qualification programs to ensure that the individuals who perform covered tasks are qualified to conduct such tasks.
Verification of Pipeline Qualification Programs 49 U.S.C. § 60131	No later than 1 year (December 17, 2003)	The Secretary shall ensure that the Department of Transportation (DOT) has in place standards and criteria for such qualification programs. Note: In 1999, the OPS implemented operator qualification requirements. Final Rulemaking, Pipeline Safety: Qualification of Pipeline Personnel, 64 Fed. Reg. 46,853 (1999) (to be codified at 49 C.F.R. pts. 192, 195). The OPS' regulations are performance-based, and do not include prescriptive standards and criteria.
Verification of Pipeline Qualification Programs 49 U.S.C. § 60131	No later than 36 months (December 17, 2005)	The Secretary shall (1) develop tests and other requirements for certifying the qualifications of individuals who operate computer-based systems for controlling the operations of pipelines; and (2) establish and carry out a pilot program for three pipeline facilities under which the individuals operating computer-based systems for controlling the operations of pipelines at such facilities are required to be certified.
Risk Analysis and	No later than 12 months (December	The Secretary shall issue regulations prescribing standards to direct an operator's conduct of a risk analysis and adoption and

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
Integrity Management Programs for Gas Pipelines 49 U.S.C. § 60109	17, 2003)	implementation of an integrity management program for gas facilities located in HDAs. The regulations shall require an operator to conduct a risk analysis and adopt a written integrity management program within a time period prescribed by the Secretary, ending no later than twenty-four months after such date. No later than eighteen months after such date, each operator of a gas pipeline facility shall begin a baseline integrity assessment. If regulations are not issued addressing the elements of an integrity management program, the operator of a pipeline facility shall conduct a risk analysis and adopt and implement an integrity management program no later than twenty-four months after the enactment date of this subsection. Note: In August 2002, the OPS issued a final rule defining HCAs for gas pipelines, which are areas "where the potential consequences of a gas pipeline accident may be significant or may do considerable harm to people and their property." Final Rulemaking, Pipeline Safety: High Consequence Areas for Gas Transmission Pipelines, 67 Fed. Reg. 50,824 (Aug. 6, 2002) (to be codified at 49 C.F.R. pt. 192). As noted above, HCAs include Class 3 and Class 4 locations, which include more densely populated areas that already have been identified by pipelines under current regulations. *Id.* Identifying HCAs for gas pipelines is the first of a two-step process to develop integrity management program requirements for gas pipelines. The OPS plans to propose regulatory requirements designed to improve the integrity of gas transmission facilities located in HCAs.
Creation of Interagency Committee 49 U.S.C. § 60133	No later than 30 days (January 17, 2003)	Subject to the limitations of the Act, the Secretary shall revise the DOT's regulations to permit a pipeline operator subject to time periods for repair specified by rule to implement alternative mitigation measures until all applicable permits have been granted. (See below at III.F)
Inspection by Direct Assessment 49 U.S.C. § 60102	No later 1 year (December 17, 2003)	The Secretary shall issue regulations prescribing standards for inspection of a pipeline facility by direct assessment.

III. REPORTING, CONSULTING, AND OTHER ACTIONS REQUIRED BY THE SECRETARY OF TRANSPORTATION, THE COMPTROLLER GENERAL, THE PRESIDENT, FERC, AND OTHER FEDERAL AGENCIES.

A. Population Encroachment and Rights-of-Way

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
49 U.S.C. § 60127	No later than 1	The Secretary, in conjunction with the FERC, and in consultation with appropriate Federal agencies and State and local governments, shall perform a study of land use practices, zoning ordinances, and preservation of environmental resources regarding pipeline rights-of-way and their maintenance.

	year (December 17, 2003)	The Secretary shall publish a report identifying practices, laws, and ordinances that are most successful in addressing issues of encroachment and maintenance on pipeline rights-of-way so as to more effectively protect public safety, pipeline workers, and the environment.
49 U.S.C. § 60127	No later than 120 days (April 17, 2003)	The heads of the DOT, the Department of Energy (DOE) and the National Institute of Standards and Technology (NIST) shall enter into a memorandum of understanding detailing their respective responsibilities regarding carrying out a program of research, development, demonstration, and standardization to ensure the integrity of pipeline facilities. Under the memorandum of understanding, • The DOT's responsibilities will reflect its lead role in pipeline safety and expertise in pipeline inspection, integrity management, and damage prevention. • The DOE's responsibilities shall reflect its expertise in system reliability, low-volume gas leak detection, and surveillance technologies. • The NIST's responsibilities shall reflect its expertise in materials research and assisting in the development of consensus technical standards.
49 U.S.C. § 60127	No later than 1 year (December 17, 2003)	The Secretary, in coordination with the Secretary of Energy and the Director of the NIST, shall prepare and transmit to Congress a five-year program plan to guide activities under this section. The plan shall be submitted to the Technical Pipeline Safety Standards Committee and the Technical Hazardous Liquid Pipeline Safety Standards Committee for review, and the report to Congress shall include the comments of the committees. In preparing the program plan and selecting and prioritizing appropriate project proposals, the Secretary shall consult with (1) appropriate representatives of the natural gas, crude oil, and petroleum product pipeline industries; (2) utilities; (3) manufacturers; (4) institutions of higher learning; (5) federal agencies; (6) pipeline research institutions; (7) national laboratories; (8) State pipeline safety officials; (9) labor organizations; (10) environmental organizations; (11) pipeline safety advocates; and (12) professional and technical societies.
49 U.S.C. § 60127	No later than 1 year (December 17, 2003), and annually thereafter	The heads of the participating agencies shall transmit jointly to Congress a report on the status and results to date of the implementation of the program plan.

B. Verification of Pipeline Qualification Programs

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
49 U.S.C. § 60131	No later than 2 years (December 17, 2004)	The Secretary shall require pipeline facility operators to develop and adopt qualification programs to ensure that the individuals who perform covered tasks are qualified to conduct such tasks.
49 U.S.C. § 60131	No later than 1 year (December 17, 2003)	The Secretary shall ensure that the DOT has in place standards and criteria for such qualification programs. (See above in Section II) Note: In 1999, the OPS implemented operator qualification requirements. Final Rulemaking, Pipeline Safety: Qualification of Pipeline Personnel, 64 Fed. Reg. 46,853 (1999) (to be codified at 49 C.F.R. pts. 192, 195). The OPS' regulations are performance-based, and do not include prescriptive standards and criteria.
49 U.S.C. § 60131	No later than 3 years (December 17,	The Secretary shall review the qualification programs of each pipeline operator and verify compliance with the DOT's standards and criteria.

	2005)	
49 U.S.C. § 60131	No later than 36 months (December 17, 2005)	The Secretary shall (1) develop tests and other requirements for certifying the qualifications of individuals who operate computer-based systems for controlling the operations of pipelines; and (2) establish and carry out a pilot program for three pipeline facilities under which the individuals operating computer-based systems for controlling the operations of pipelines at such facilities are required to be certified. (See above in Section II)
49 U.S.C. § 60131	No later than 4 years (December 17, 2006)	The Secretary shall transmit to Congress a report on the status and results to date of the personnel qualification regulations issued, and on the results of the pilot program.

C. Risk Analysis and Integrity Management Programs for Gas Pipelines

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
49 U.S.C. § 60109	No later than 12 months (December 17, 2003)	As set forth above in Sections I and II, the Secretary shall issue regulations prescribing standards to direct an operator's conduct of a risk analysis and adoption and implementation of an integrity management program for gas facilities located in HDAs. If regulations are not issued addressing the elements of an integrity management program, a gas pipeline operator must conduct a risk analysis and adopt and implement an integrity management program no later than twenty-four months after the enactment date of this subsection.
49 U.S.C. § 60109	No later than 4 years (December 17, 2006)	The Comptroller General shall complete an assessment and evaluation of the public safety and the environment effects of the requirements for implementing integrity management programs contained in the standards required by the Act.
49 U.S.C. § 60109	No later than 4 years (December 17, 2006)	The Comptroller General shall conduct a study to evaluate the seven-year facility reassessment requirement that will be contained in each operator's integrity management program, and transmit to Congress a report on the results of the study.

D. One-Call Notification Measures

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
Implementation of best practices guidelines 49 U.S.C. § 6105[40]	No deadline	The Secretary shall encourage States, operators of one-call notification programs, excavators (including all government and contract excavators), and underground facility operators to adopt and implement practices identified in the best practices report entitled Common Ground. U.S. DEP'T OF TRANS., COMMON GROUND: A STUDY OF ONE-CALL SYSTEMS & DAMAGE PREVENTION BEST PRACTICES (1999). Note: In May 2002, the RSPA issued an advisory notice to operators of natural gas and hazardous liquid pipeline facilities reminding them of the importance of safe excavation practices. The notice also requested the Common Ground Alliance, a new national non-profit damage prevention organization, and other organizations to help distribute the advisory. Notice Protecting Buried Pipelines by Using Safe Excavation Practices, Operators of Natural Gas and Hazardous Liquid Pipelines to Encourage Continued Implementation of Safe Excavation Practice, 67 Fed. Reg. 36,666 (2002).
Nation-wide Toll-Free	Within 1 year (December 17,	The Secretary shall, in conjunction with the FCC, facility operators, excavators, and one-call notification system operators, provide for

40. One-Call Notification Programs, 49 U.S.C. §§ 6101-08 (2000).

Number System	2003)	the establishment of a three-digit nationwide toll-free telephone number system to be used by State one-call notification systems.

E. Other DOT Reports & Studies

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
Enactment of Inspector General's Report safety improvement recommendations	No later than 90 days (March 17, 2003), and every 90 days thereafter	Until each safety improvement recommendation provided for in the DOT's Inspector General's Report is enacted, the Secretary shall transmit a report on the specific actions taken to implement such recommendations to the Senate Committee on Commerce, Science, and Transportation, the House Transportation and Infrastructure Committee, and the House Energy and Commerce Committee. OFFICE OF INSPECTOR GENERAL, U.S. DEP'T OF TRANS., AUDIT OF THE PIPELINE SAFETY PROGRAM, RT-2000-069 (2000)
Report to Congress re: NTSB Recommendations	Every January 1	The Secretary, RSPA Administrator, and the OPS Director shall submit to Congress a report containing each pipeline safety recommendation made by the NTSB during the prior year, and the response to such recommendation.
Report to Congress re: cable suspension bridges	Within 2 years (December 17, 2004)	The Secretary shall complete and transmit to Congress the results of a study to determine whether cable-suspension pipeline bridges pose structural or other risks warranting particularized attention in connection with pipeline operators risk assessment programs and whether the DOT needs to develop particularized inspection standards to recognize the peculiar risks posed by such bridges.

F. Creation of Interagency Committee

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
49 U.S.C. § 60133	No later than 30 days (January 17, 2003)	The President shall establish an Interagency Committee to develop and ensure implementation of a coordinated environmental review and permitting process in order to enable pipeline operators to commence and complete all activities necessary to carry out pipeline repairs within any time periods specified by rule by the Secretary. The Chair of the Council on Environmental Quality shall chair the Interagency Committee, which shall consist of representatives of federal agencies with responsibilities relating to pipeline repair projects, including (1) the Secretary; (2) the Administrator of EPA; (3) the Director of FWS; (4) the Asst Administrator NOAA; (5) the Director of BLM; (6) Director of MMS; (7) the Asst Secretary of the Army for Civil Works; (8) the Chairman of FERC.
49 U.S.C. § 60133	No later than 1 year (December 17, 2003)	The members of the Interagency Committee shall enter into a memorandum of understanding to provide for a coordinated and expedited pipeline repair permit review process to carry out the purposes set forth above. The memorandum of understanding shall be based on the Committee's evaluation of federal permitting requirements to which access, excavation, and restoration activities in connection with pipeline repairs may be subject. As part of this evaluation, the Committee shall examine the access, excavation, and restoration practices of the pipeline industry in connection with such pipeline repairs, and may develop a compendium of best practices used by the industry to access, excavate, and restore the site of a pipeline repair. In carrying out this subsection, the Committee shall consult with appropriate State and local environmental, pipeline safety, and

		emergency response officials, and other such officials as the Committee considers appropriate.
49 U.S.C. § 60133	No later than 18 months after completing memorandum of understanding	Each agency represented on the Interagency Committee shall revise its regulations as necessary to implement the provisions of the memorandum of understanding.
49 U.S.C. § 60133	No later than 30 days (January 17, 2003)	Subject to the limitations of the Act, the Secretary shall revise the DOT's regulations to permit a pipeline operator, subject to time periods for repair specified by rule, to implement alternative mitigation measures until all applicable permits have been granted. (See above at Section II)

G. Deadlines for the Comptroller General

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
Penalties 49 C.F.R. § 60123	No later than 1 year (December 17, 2003)	The Comptroller General shall conduct a study of the Secretary's actions, policies, and procedures for assessing and collecting fines and penalties on operators of hazardous liquid and gas transmission pipelines. The Comptroller General shall transmit a report on the results of the study to the Senate Committee on Commerce, Science, and Transportation, the House Committee on Transportation and Infrastructure and the House Committee on Energy and Commerce.

H. Deadline for FERC Study and Report on Natural Gas Pipeline and Storage Facilities in New England

Statutory Reference	Deadline (years/months after date of enactment)	Required Action
Study of New England gas transmission and storage facilities	1 year (December 17, 2003)	The FERC shall, in consultation with the DOE, conduct a study on the natural gas pipeline transmission network in New England and natural gas storage facilities associated with that network. The FERC shall prepare a report containing the results of the study, including recommendations for addressing potential natural gas transmission and storage capacity problems in New England. The FERC shall submit the report to the Senate Committee on Commerce, Science, and Transportation, the House Transportation and Infrastructure Committee, and the House Energy and Commerce Committee.