FROM "COMMAND AND CONTROL" TO RISK MANAGEMENT: THE EVOLUTION OF THE FEDERAL NATURAL GAS PIPELINE SAFETY PROGRAM

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I. INTRODUCTION

Although pipeline transportation is statistically the safest mode of transportation,[1] regulators are reassessing the traditional "command and control" approach to regulating the safety of natural gas pipeline transportation.[2] The historical paradigm of regulation was one in which Congress reacted to isolated pipeline accidents with piece-meal legislation, and the Department of Transportation (DOT) implemented Congress's mandates by promulgating prescriptive safety regulations, although often only after congressional deadlines. These direct and ever-increasing regulations failed, however, to prevent the sensational pipeline accidents that occurred in Edison, New Jersey and Reston, Virginia, discussed *infra*, which were caused by third-party excavation damage.[3] Moreover, the proximity of the Edison accident to residential areas highlighted a concern that, as the nation's population has grown and cities have expanded, the risk of damage to pipelines from human activity and the number of people exposed to

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1. *See* National Transportation Safety Board (NTSB) News Release SB 94-20 (July 1, 1994) (disclosing that pipeline-related fatalities were lower than highway, rail, marine and aviation-related fatalities).

2. This article focuses on natural gas pipeline safety. Pipelines that transport hazardous liquids (such as petroleum) are discussed in this article only when relevant to natural gas pipeline safety, or for purposes of providing historical background. Although there are differences in the history and development of natural gas and liquid pipeline safety regulation, the two industries are currently regulated under twin regulatory programs administered by the same agency, the Office of Pipeline Safety (OPS).

3. In response to the question of whether more inspectors would be used as a result of the accident, the then-Associate Administrator for Pipeline Safety was quoted as saying, "If I had hired 100 more inspectors, the Colonial pipeline spill [in Reston, Virginia] still would have happened." 17 Chem. Reg. Rep. (BNA) 140, 140 (1993).

these risks have increased.[4] These factors and others provoked for the first time a public commitment from the Secretary of Transportation to change the existing method of pipeline safety regulation,[5] which has been an adversarial process between regulators and the regulated. The new commitment envisions a partnership between industry and regulators with substantial public involvement in developing regulations, new technology, and standards of care. This article discusses the evolution of the federal pipeline safety program,[6] the changes which have provoked the new commitment to involve industry and the public in improving the program, and Congress's proposal to require the DOT to implement an experimental risk-based regulatory structure.

II. THE HISTORICAL PARADIGM

The first federal pipeline safety program was created in 1968 when Congress enacted the Natural Gas Pipeline Safety Act (NGPSA or Act) and authorized the DOT to develop and implement the first federal natural gas pipeline safety regulations, with oversight by Congress and the National Transportation Safety Board (NTSB). During the period between 1970-1979, however, a comprehensive pipeline safety program failed to develop. The Office of Pipeline Safety (OPS), the agency to which the DOT delegated its authority under the NGPSA, was inexperienced, understaffed,[7] and unable to develop an effective enforcement program.[8]

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4. *See* TRANSPORTATION RESEARCH BD., NATIONAL ACADEMY OF SCIENCE, SPECIAL REPORT 219: PIPELINES AND PUBLIC SAFETY 29 (1988).

5. *See* Transcript of Joint Meeting of the Hazardous Liquid Pipeline Safety Standards and Technical Pipeline Safety Standards Committees at 390 (Nov. 3, 1994) [hereinafter *Joint Meeting Transcript*].

6. The Natural Gas Pipeline Safety Act (NGPSA or Act) is the primary statute governing natural gas pipeline safety. Several other federal statutes and regulations also impose safety and environmental requirements on natural gas and other pipeline facilities. For example, the Hazardous Liquid Pipeline Safety Act, 49 U.S.C. §§ 2001-2016 (current version at 49 U.S.C.A. §§ 60110-60601 (West Supp. 1995)), regulates the safety of hazardous liquid pipeline transportation, including the transportation of oil, and the Occupational Safety & Health Act, 29 U.S.C. §§ 651-678 (1988), governs the health and safety of pipeline employees generally. *See also* 18 C.F.R. pt. 157 (1995) (Federal Energy Regulatory Commission (FERC) regulations governing the siting and construction of, as well as certain environmental conditions which must be met by, interstate natural gas pipelines); 30 C.F.R. pt. 250 (1994) (Minerals Management Service regulations, including safety requirements, governing pipelines located on the Outer Continental Shelf); 43 C.F.R. pts. 2280-2887, 3160-65 (1994) (Bureau of Land Management regulations, including safety standards, governing pipelines which traverse federal lands). In addition, various environmental and health and safety statutes apply to activities associated with pipeline operations. *See, e.g.*, Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. § 136 (1994) (governing pesticide and herbicide use on pipeline rights-of-way); National Environmental Policy Act, 42 U.S.C. § 4321 (1988) (governing environmental impact assessment procedures to be observed prior to siting and constructing a pipeline).

7. For example, in 1971, the OPS was authorized to fill 29 positions, but filled only 23, and only two full-time positions were devoted to enforcement. S. REP. NO. 829, 92d Cong., 2d Sess. (1972), *reprinted in* 1972 U.S.C.C.A.N. 3049, 3050. A program Director was not formally appointed until 1972. *Id.*

8. For example, by 1975, the OPS had brought a total of only 65 enforcement actions, more than 61% of which were for failure to file an annual report. S. REP. NO. 852, 94th Cong., 2d Sess. (1972), *reprinted in* 1976 U.S.C.C.A.N. 4673, 4676.

A. The Natural Gas Pipeline Safety Act

Prior to 1968, the major interstate natural gas pipelines were designed, constructed, operated and maintained according to prescriptive industry standards, which had been adopted by a majority of the states.[9] Pipeline transportation was the last remaining major transportation area for which safety was not regulated by the federal government.[10] Although acknowledging that the safety record of the industry had been good, Congress in the late 1960s became concerned about the tremendous increase in the use of natural gas and the number of miles of natural gas lines, the concurrent growth of the population, and recent pipeline transmission and distribution accidents.[11] As a result of these concerns, Congress enacted the NGPSA.[12]

The NGPSA established a cooperative federal-state safety program, in which exclusive jurisdiction over all interstate natural gas pipeline facilities was vested in the DOT, while states were encouraged, through the use of grants-in-aid, to assume voluntarily inspection and enforcement responsibilities for intrastate pipeline facilities.[13] States could adopt additional or more stringent standards for intrastate facilities as long as such standards were compatible with the federal minimum standards, but in no event could states adopt safety standards applicable to interstate pipelines.[14]

In order for a state to be eligible, the NGPSA required that the state annually certify, among other things, that the state had adopted the federal safety standards as applicable to its intrastate pipelines. In the absence of state certification, the DOT would regulate intrastate pipelines. Even if the state did not meet the certification requirements, the DOT could enter into an agreement with the state to permit the state to inspect intrastate pipeline facilities and monitor a compliance program, except that the state could not enforce safety standards.[15] In addition, Congress amended the NGPSA in 1972 to allow states to act as an agent of the Secretary of Transportation with respect to interstate pipelines.[16] The DOT was authorized to provide states up to fifty percent of the costs necessary to carry out any of these authorized state safety programs.[17]

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9. Twenty-five out of twenty-six states that adopted pipeline safety codes used the American National Standard Code (ANSC) for Pressure Piping, Gas Transmission and Distribution Systems B31.8 as their pipeline safety code. *See* H.R. REP. NO. 1390, 90th Cong., 2d Sess. (1968), *reprinted in* 1968 U.S.C.C.A.N. 3223, 3228.

10. S. REP. NO. 829, 92d Cong., 2d Sess. (1972), *reprinted in* 1972 U.S.C.C.A.N. 3049.

11. H.R. REP. NO. 1390, 90th Cong., 2d Sess. (1968), *reprinted in* 1968 U.S.C.C.A.N. 3223, 3225-26.

12. The Act was originally codified at 49 U.S.C. §§ 1671-1688, but pursuant to Pub. L. No. 103-272, 108 Stat. 1379 (1994), the NGPSA was recodified at 49 U.S.C. §§ 60110-60601. Therefore, citations to the recodified version will be used throughout this article, except where it is necessary for purposes of historical accuracy to refer to 49 U.S.C. §§ 1671-1688.

13. 49 U.S.C. § 1674 (1988) (current version at 49 U.S.C.A. § 60103 (West Supp. 1995)).

14. *Id.* § 1674(a).

15. *Id.* § 1674(c)(1).

16. *Id.*

17. 49 U.S.C. § 1672(b) (1988) (current version at 49 U.S.C.A. § 60102(g) (West Supp. 1995)).

The NGPSA also required pipeline operators to file and comply with inspection and maintenance plans to achieve the safe operation of each of the operator's pipeline facilities.[18] In 1976, Congress amended the NGPSA to require pipeline operators to educate the public on the hazards associated with natural gas leaks.[19]

The original NGPSA authorized the DOT to assess civil penalties of up to $1,000 for each violation, with a maximum aggregate of $200,000,[20] and to request injunctive relief from the United States District Courts pursuant to the Federal Rules of Civil Procedure.[21] In 1976, Congress amended the NGPSA to authorize citizen suits.[22] The Secretary of Transportation and certified states were authorized to waive compliance with a safety standard, provided the waiver was "not inconsistent with pipeline safety,"[23] and judicial review of both standards and waivers in the United States Court of Appeals for the District of Columbia Circuit was established.[24] Enforcement authority under the NGPSA has been delegated by the DOT to the Research and Special Programs Administration (RSPA),[25] which in turn has delegated responsibility to the OPS. The OPS has established five regions and as many regional offices, staffed by inspectors whose duty it is to enforce compliance regarding the 50 states and Puerto Rico.[26]

The original NGPSA instructed the Secretary of the DOT to adopt as interim federal minimum safety standards the pipeline safety standards then in effect in the states.[27] Within two years, however, the DOT was required to adopt its own safety regulations, which would then preempt state safety requirements.[28] Accordingly, in 1970, the OPS adopted 49 C.F.R. Parts 191 and 192, which governed reporting requirements and the design, construction, operation and maintenance of natural gas pipeline facilities. The OPS's rulemaking philosophy was to adopt performance-based standards[29] and to rely upon industry expertise by using the Technical Pipeline Safety Standards Committee (TPSSC),[30] a technical advisory

18. 49 U.S.C. § 1680 (1988) (current version at 49 U.S.C.A. § 60108 (West Supp. 1995)).

19. Pub. L. No. 94-477, 90 Stat. 2073 (1976) (current version at 49 U.S.C.A. § 60116 (West Supp. 1995)).

20. 49 U.S.C. § 1678 (1988). The amounts were later increased and currently permit a maximum of $25,000 for each violation and $500,000 for a series of related violations. 49 U.S.C.A. § 60122(a) (West Supp. 1995).

21. 49 U.S.C. § 1679 (1988) (current version at 49 U.S.C.A. § 60120(a)(1) (West Supp. 1995)).

22. Pub. L. No. 94-477, 90 Stat. 2073 (1976) (current version at 49 U.S.C.A. § 60121(a) (West Supp. 1995)).

23. 49 U.S.C. § 1672(e) (1988) (current version at 49 U.S.C.A. § 60102(d) (West Supp. 1995)).

24. 49 U.S.C. § 1675 (1988) (current version at 49 U.S.C.A. § 60119 (West Supp. 1995)).

25. 49 C.F.R. § 1.53 (1994).

26. The five regional offices are located in Washington, D.C., Kansas City, Atlanta, Houston and Denver.

27. 49 U.S.C. § 1672(a) (1988).

28. 49 U.S.C. § 1671(a), (b) (1988).

29. J.C. Caldwell, *At the Crossroads*, PIPE LINE INDUS., Dec. 1990, at 15. Mr. Caldwell was OPS Director from 1970 to 1975 and was involved in the development of pipeline safety regulations for both gas and liquid pipelines.

30. The advisory committee, which exists today, is subject to the requirements of the Federal Advisory Committee Act (FACA), 5 U.S.C. app. § 2 (1994). The fifteen-member committee consists of

committee created by Congress to review, advise and comment on proposed federal regulations prior to final adoption by the Secretary of Transportation.[31] During this time, most of the OPS's field activity consisted of educating operators about the new requirements.[32]

In 1974, Congress created the NTSB,[33] a legislative agency responsible for investigating transportation accidents to determine safety improvements that could be recommended through legislation or rulemaking. The NTSB consists of five members appointed by the President and uses a small group of pipeline technicians to investigate pipeline accidents that cause "a fatality, substantial property damage, or significant injury to the environment."[34] Throughout the lifetime of the federal pipeline safety program, the DOT has been subject to close scrutiny and oversight by the NTSB. The OPS has disagreed with many of the NTSB's recommendations, often concluding that recommendations were inappropriate to address the identified problems or that rulemaking action recommended by the NTSB could not be justified.[35] As a legislative agency, however, the NTSB has strongly influenced congressional amendments. Many such amendments enacted between 1979 and 1992, discussed *infra*, overlap with concerns expressed in the NTSB's pipeline accident findings and recommendations.

B. The Expansion of the Natural Gas Pipeline Safety Act

While the federal pipeline safety program during 1970-1979 was obscure and slow to develop, the period between 1979-1992 was an era characterized by program expansion and increasing public attention to pipeline safety. During this period, Congress enacted a series of major statutory amendments to the NGPSA which clarified and expanded the DOT's regulatory responsibilities. Although Congress sought to create both a credible and functional federal agency to govern and oversee the nation's network of pipelines, the OPS was only able to issue more rules in response to congressional mandates, often behind congressional schedules, rather than assert its own pipeline safety agenda.

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five members from government agencies, four from the natural gas industry, and six from the general public. Congress subsequently added the requirement to include members with environmental expertise. Pub. L. No. 102-508, 106 Stat. 3289 (1992).

31. The general purpose of the TPSSC is to provide technical and policy advice to the OPS when it promulgates regulations. While the OPS is not required to accept the committee's recommendations on proposals, it has historically been reluctant to issue any regulations opposed by the advisory committee and has relied heavily on the committee's recommendations for the development and drafting of pipeline safety regulations.

32. An exception to this activity was the OPS's first major amendment to its regulations, which added a new subpart specifying requirements for corrosion control. *See* 36 Fed. Reg. 12,302 (1971). Corrosion, both external and internal, is one of the conditions most threatening to the integrity of steel pipe, which if left undetected can result in the rupture of the pipe.

33. Independent Safety Board Act, Pub. L. No. 93-633, 88 Stat. 2167 (codified at 49 U.S.C. §§ 1111-1118 (1988)).

34. 49 U.S.C. § 1131(D) (1988).

35. *See, e.g.*, 55 Fed. Reg. 23,514 (1990) (reporting the RSPA's defense of its position in response to the NTSB's 18 proposals for new or amended standards).

1. The 1979 Amendments: LNG and Increased Enforcement Authority

The first major amendment, the Pipeline Safety Act of 1979,[36] made it clear that OPS regulatory responsibility extended to liquified natural gas (LNG)[37] facilities and granted the OPS new enforcement powers.[38] The 1979 LNG amendments were enacted in response to congressional concern over the adequacy of existing LNG standards.[39] Prior to the 1979 amendments, LNG standards had merely incorporated by reference the National Fire Protection Association (NFPA) 59A standard applicable to the storage and handling of LNG. In 1976, Congress warned the OPS that if it did not act soon to upgrade these requirements, Congress would consider enacting legislation to require the OPS to do so.[40] Since the OPS failed to upgrade the NFPA 59A standard,[41] Congress amended the NGPSA to clarify that the definition of gas includes LNG and to require the DOT to establish minimum standards for the location, design, installation, construction, ini-

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36. Pub. L. No. 96-129, 93 Stat. 989 (1979) (current version codified in scattered sections of 49 U.S.C.A. (West Supp. 1995)).

37. LNG is natural gas that has been changed to a liquid state by subjecting it to very low temperatures. *See generally* Brian D. O'Neill, *Synthetic Natural Gas (SNG) and Liquefied Natural Gas (LNG)*, 3 ENERGY LAW AND TRANSACTIONS § 56.02 (David J. Muchow & William A. Mogel eds., 1993).

38. The Pipeline Safety Act also created an entirely new statute, the Hazardous Liquid Pipeline Safety Act (HLPSA), 49 U.S.C. app. § 2001 *et. seq.* (current version codified jointly with the NGPSA in scattered sections of 49 U.S.C.A.), which mirrored the authority contained in the NGPSA and provided the OPS, through the Secretary of Transportation, with a twin program designed to regulate the transportation of hazardous liquids by pipeline. Hazardous liquids include petroleum, petroleum products, and "any substance the Secretary of Transportation decides may pose on unreasonable risk when transported in a liquid state (excluding liquified natural gas). 49 U.S.C.A. § 60101(a)(4) (West Supp. 1995). Prior to the HLPSA, the Transportation of Explosives Act (TOEA) authorized the Interstate Commerce Commission (ICC) to regulate liquid pipelines. 18 U.S.C. §§ 831-835 (1988), *repealed by* Pub. L. No. 96-129, 93 Stat. 1015 (1979). In April 1967, authority to regulate the safety of liquid pipelines was transferred from the ICC to the Federal Railroad Administration (FRA), an agency under DOT oversight. In 1972, Congress transferred authority to regulate liquid pipeline safety from the FRA to the Secretary of Transportation. Pub. L. No. 92-401, 86 Stat. 616 (1972). This authority was ultimately delegated to the Materials Transportation Bureau (MTB) which was abolished in 1985 after its authority had been transferred to the OPS. 49 C.F.R. § 1.53 (1994). The TOEA was repealed in 1979 by the Pipeline Safety Act, 93 Stat. 989 (1979). It was not until 1985, however, that the federal pipeline safety regulations were extended to intrastate liquid pipeline facilities. 50 Fed. Reg. 15,895 (1985). Aside from the technical distinctions between operating and maintaining oil versus gas pipelines, there are few differences in the gas and liquid regulatory programs, both of which are now administered by the OPS.

39. *See* S. Rep. No. 852, 94th Cong., 2d Sess. (1976), *reprinted in* 1976 U.S.C.C.A.N. 4673, 4676. Moreover, LNG had become a necessary alternate supply of natural gas for pipeline transportation because the wellhead gas supply had not kept pace with the nation's energy needs due to what has been acknowledged to have been artificially-depressed prices to producers under the rate scheme of the Natural Gas Act (NGA), 15 U.S.C. § 717(f) (1994), which is administered by the FERC, successor to the Federal Power Commission.

40. S. REP. NO. 852, 94th Cong., 2d Sess. (1976), *reprinted in* 1976 U.S.C.C.A.N. 4673, 4676.

41. Regulations governing the design, construction, operation and maintenance of LNG facilities were still in the drafting stage at the time Congress enacted the 1979 amendments. *See* S. REP. NO. 182, 96th Cong., 1st Sess. (1979), *reprinted in* 1979 U.S.C.C.A.N. 1971, 1973.

tial inspection and initial testing of any new LNG facility.[42] Regulations governing LNG facilities are codified in 49 C.F.R. Part 193.[43]

Until the 1979 amendments, the OPS could assess only civil penalties for violations of its safety regulations. More concerned with having violations corrected than in assessing fines, the OPS sought authority from Congress to issue administrative injunctive orders to compel compliance. As a result, Congress empowered the DOT to use the so-called compliance order remedy, borrowed from the Hazardous Materials Transportation Safety program, an agency also administered by the RSPA.[44] Congress agreed that there were situations in which a compliance order would be more effective than a financial penalty, such as to compel corrective action by small distribution companies whose limited resources might require a choice between paying penalties and implementing corrective action.[45]

Perhaps the most significant enforcement provision added to the NGPSA was one which authorized the DOT to use an extraordinary remedy known as a "hazardous facility order" (HFO). This new remedy was designed to address imminent hazards to life or property, as determined by the OPS. Congress authorized the Secretary of Transportation to require corrective action, after notice and opportunity for a hearing, if the Secretary found that the facility was: (1) hazardous to life, property, or the environment; or (2) constructed or operated with equipment, material, or a technique the Secretary decides is hazardous to life, property, or the environment.[46] The OPS's use of the HFO appears, however, to have been

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42. 49 U.S.C.A. § 60103 (West Supp. 1995).

43. The new regulations did not, however, apply to LNG facilities under construction before the published date of the regulations or to LNG facilities for which an approved application was filed before March 1, 1978 with the Department of Energy, or if required, a state or local agency. *See* Energy Terminal Servs. Corp. v. New York State Dept. Envtl. Conserv., 11 Envtl. L. Rep. (Envtl. L. Inst.) 20871 (E.D.N.Y. 1981). These facilities remained governed by the NFPA standard. *Id.*

44. *See* S. REP. NO. 182, 96th Cong., 1st Sess. (1979), *reprinted in* 1979 U.S.C.C.A.N. 1971, 1992-93.

45. *Id.* at 1992.

46. In making this determination, the Secretary was directed to consider a number of factors, including:

> (A) the characteristics of the pipe and other equipment used in the pipeline facility involved, including its age, manufacturer, physical properties . . . , and the method of its manufacture, construction, or assembly;
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> (B) the nature of the materials transported by such facility (including the corrosive and deteriorative qualities), the sequence in which such materials are transported, and the pressure required for such transportation;
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> (C) the aspects of the areas in which the pipeline facility is located, in particular the climatic and geologic conditions (including soil characteristics) associated with such areas, and the population density and population and growth patterns of such areas;
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> (D) any recommendation of the National Transportation Safety Board issued in connection with any investigation conducted by the Board under other provisions of law; and
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> (E) such other factors as the Secretary may consider appropriate.

49 U.S.C. app. § 1679b(b)(3) (1988) (current version at 49 U.S.C.A. § 60120(a)(1) (West Supp. 1995)).

The HFO provision also authorized the Secretary to issue an order without notice and an opportunity for a hearing if the Secretary decides that failure to issue the order expeditiously likely will result in serious harm to life, property, or the environment. *Id.* § 1679b(b)(5). However, an opportunity for a hearing must be provided as soon as practicable after issuing the order. *Id.*

reserved almost exclusively for restricting the operation of a pipeline facility after a liquid pipeline accident has occurred. A review of HFOs issued since 1985 reveals several interesting trends: Out of 27 orders, 25 were issued in response to an accident; 22 were directed to environmental concerns related to hazardous liquid facilities which had experienced ruptures or leaks resulting in oil or oil product spills; and 16 were issued by the Central Region office of the OPS.[47]

Finally, Congress authorized the DOT to assess criminal penalties for knowing and wilful violations of regulations under the NGPSA. Criminal penalties subsequently have been extended to cover knowingly and wilfully damaging or destroying an interstate facility, sign or right-of-way marker, or not using a one-call system when excavating.[48]

In 1980, under its own rulemaking authority, the DOT promulgated administrative enforcement procedures codified in 49 C.F.R. Part 190.[49] These procedures include a unique informal hearing process, which does not require strict adherence to rules of evidence or even an Administrative Law Judge to preside over the hearing.[50]

2. The 1985 and 1986 Amendments: User Fees and Incident Reports

Looking for ways to reduce the budget deficit, Congress proposed to impose energy-related user fees on a number of regulated industries. As a result, in 1985, Congress enacted the Consolidated Omnibus Budget Reconciliation Act (COBRA) which, among other things, authorized the Secretary of the DOT to collect user fees from all pipelines subject to the DOT's jurisdiction under the NGPSA and the HLPSA in order to recover the total costs incurred by the DOT in administering the pipeline safety program.[51] COBRA authorized the DOT to assess fees on gas and hazardous liquid pipelines based on usage in reasonable relationship to volume-miles, miles, revenues or an appropriate combination thereof.[52]

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47. This information is based on HFOs issued by the OPS since 1985, was obtained pursuant to a Freedom of Information Act request, and remains on file with the authors.

48. 49 U.S.C.A. § 60123 (West Supp. 1995).

49. *See* 45 Fed. Reg. 20,413 (1980). These procedures were promulgated without public notice or a period for comment, which prompted certain commentators to question whether the lack of such violated the Administrative Procedure Act. *See* JOHN T. SCOTT & JOHN E. GRAYKOWSKI, EASTERN MINERAL LAW INST., THE FEDERAL PIPELINE SAFETY STATUTES: THE NEED FOR INCREASED COMPANY AWARENESS 20-21 (1991).

50. *See* 49 C.F.R. § 190.211(d) (1994). Commentators have suggested that the lack of formal adjudicatory hearings may violate due process. SCOTT & GRAYKOWSKI, *supra* note 49, at 20-31.

51. Pub. L. No. 99-272, 100 Stat. 139 (1986) (current version codified in scattered sections of 49 U.S.C.A.).

52. 49 U.S.C.A. § 60301 (West Supp. 1995). The authorization to assess fees was challenged as an unconstitutional delegation of the taxing power from Congress to the Executive Branch in *Skinner v. Mid-America Pipeline Co.*, 490 U.S. 212 (1989). In that case, the Supreme Court rejected the pipeline's argument that the delegation of discretionary taxing power to the Executive Branch required a stricter application of the nondelegation standard. *Id.* at 220. The Court held that, even assuming the assessments were "taxes," nothing in the Constitution or congressional practice required the application of a stricter standard. *Id.* The Court applied the ordinary nondelegation standard, which requires

Also as part of the 1986 reauthorization amendments, Congress directed the DOT to issue regulations requiring operators of gas and hazardous liquid pipeline facilities (other than operators of master meters systems) to provide for discovery of such conditions in their inspection and maintenance plans and to report certain safety-related conditions.[53] The House Committee on Energy and Commerce added the new reporting requirements partly in response to the findings of an investigation of a major pipeline incident in Kentucky. The investigations revealed that although an employee had discovered a seriously corroded area on the pipeline that eventually failed, his internal report of the corrosion was not acted on promptly. The RSPA surmised that "[t]he Committee apparently reasoned that had there been a legal obligation to report the corrosion condition to the government, the information might have prompted government intervention in time to assure correction and thus avoid the eventual major incident."[54] The OPS issued final rules implementing the congressional amendments in 1988 and 1989.[55]

3. The 1988 Amendments: One-Call Programs and Personnel Qualifications

Among the most important additions to the NGPSA in 1988[56] was the authorization for the OPS to establish state one-call program procedures

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Congress to provide the Executive Branch guidance in the exercise of its delegated taxing power, and held that Congress had provided the requisite specificity in COBRA. *Id.* at 223.

In 1992, the user fees were again challenged, albeit on different grounds, in *Five Flags Pipe Line Co. v. DOT*, No. CIV.A.89-0119, 1992 WL 78773 (D. D.C. Apr. 1, 1992). In that case, an intrastate pipeline challenged the DOT's establishment of a fee schedule pursuant to COBRA, alleging that certified intrastate pipelines were not subject to the NGPSA and, consequently, that the RSPA could not assess user fees on intrastate pipelines with certified pipeline safety programs. *Id.* at *2. The court rejected this argument, explaining that the jurisdiction of the NGPSA extended to both interstate and intrastate pipelines that operate in certified states, because even after certification, the certified state was required to submit reports and other information to the DOT, and was therefore still subject to the jurisdiction of the NGPSA. *Id.* at *7.

The intrastate pipeline also argued that the DOT had failed to comply with COBRA because it did not take into account the difference in costs that interstate and intrastate facilities operating in certified states impose on the DOT. *Id.* at *7-*8. While the court recognized that the lack of differentiation resulted in "some inequities," it deferred to the DOT's judgment not to account for differences in costs between the two types of pipelines. *Id.* at *8. The court explained that it was not possible for the DOT to take into account "every gradation in costs," and it noted that it was not presented with any evidence of a difference in costs. *Id.* Although the court acknowledged that it seemed intuitive that there would indeed be such a difference in costs, it nevertheless speculated that intrastate pipelines in certified states could impose substantial program costs on the DOT, specifically, the cost of reviewing state certification applications and monitoring state compliance with the certification program. *Id.* at *8, *9.

53. Pub. L. No. 99-516, 100 Stat. 2965 (1986) (current version at 49 U.S.C.A. § 60102(h) (West Supp. 1995)). Sub-section 60102(h) requires the Secretary of the DOT to prescribe regulations requiring operators to submit a written report concerning: (1) any condition that constitutes a hazard to life or property; and (2) any safety-related condition that causes or has caused a significant change or restriction in the operation of pipeline facilities.

54. 53 Fed. Reg. 24,942, at 24,943 (1988) (citing 132 CONG. REC. 23,413 (1986)).

55. 53 Fed. Reg. 24,942 (1988); 54 Fed. Reg. 32,342 (1989).

56. Pub. L. No. 100-561, 102 Stat. 2805 (1988) (current version codified in scattered sections of 49 U.S.C.A.).

and to require training and testing of pipeline personnel performing safety-sensitive work assignments. The primary cause of pipeline accidents has been excavation damage by third parties, otherwise referred to as "outside force" damage.[57] This damage usually occurs because of inadequate knowledge about a pipeline's location prior to excavation. The 1988 amendments directed the Secretary of Transportation to issue regulations requiring each state to adopt a one-call damage prevention program under state law as a condition to receiving a full grant-in-aid for the state's pipeline safety compliance program.[58] These "[o]ne-call notification systems, which are in existence throughout the country, are established to prevent excavation damage to underground pipelines and other utilities."[59]

Such systems typically provide a single telephone number for excavators and the public to call prior to commencing any excavation activities to notify the participating members of their intent to excavate, so that the members can then temporarily mark and identify their facilities.

In 1990, the OPS adopted regulations to implement these amendments.[60] The state one-call damage prevention program must require that a one-call notification system cover each area of the state that contains underground pipeline facilities in accordance with minimum operational requirements. Unfortunately, existing state programs have not succeeded in significantly reducing the damage to pipelines from excavations.[61] With few exceptions, the most publicized pipeline accidents either were caused by excavation activity at the instant the "strike" occurred or went undetected or unreported until the accident occurred at some later time, sometimes many years later. Both the Reston, Virginia oil pipeline accident in 1993[62] and the Edison, New Jersey natural gas pipeline accident in 1994[63] were determined to have been caused by unreported excavation activity that eventually led to the deterioration of pipe wall thickness. This sequence of events created significant questions about the adequacy of the existing state one-call systems.[64]

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57. *See* 60 Fed. Reg. 14,646 (1995).

58. Congress had expressed concern over excavation damage to pipelines for some time prior to the 1988 amendments. In 1976, Congress amended the NGPSA to require states that sought certification to certify that they were promoting programs designed to prevent excavation damage. S. REP. NO. 852, 94th Cong., 2d Sess. (1976), *reprinted in* 1976 U.S.C.C.A.N. 4673, 4680-81. In 1979, Congress mandated that the Secretary of Transportation require pipeline operators to participate in public safety programs, which were essentially "one-call programs." The OPS implemented this mandate by requiring pipeline operators to either have or participate in a damage prevention program designed to reduce the risk of excavation damage to buried pipelines. 49 C.F.R. § 192.614 (1994).

59. 55 Fed. Reg. 28,419 (1990). One-call notification systems may perform various other functions related to protecting underground pipelines and utilities from damage, such as record-keeping and promoting public awareness programs. *See id.*

60. *See* 49 C.F.R. § 198.35 (1994).

61. *See* 60 Fed. Reg. 14,646, at 14,647 (1995).

62. *See infra* note 118.

63. *See infra* text accompanying notes 125-26.

64. The NTSB determined that in the Virginia failure, the pipe surface had approximately 25 tooth-like scratch marks and that the outer surface of the pipe had "gouge marks." The NTSB also concluded that the Edison failure was caused by excavation damage. NTSB, PAR-95-01, at 75. The

In response to these deficiencies, Congress drafted a federal one-call bill in 1994 designed to establish a threshold minimum level for all state one-call programs.[65] Proponents of the bill emphasized four key elements:

> (1) *All* owners and operators of underground facilities serving the public should be required to be members of one-call systems and to participate in damage prevention programs;
> (2) Those who excavate should be required to give advance and timely notice as easily as possible;
> (3) There should be a continuing education program advising people of the risks of excavation and their responsibilities to comply with the notice and other requirements of state law; and
> (4) Where voluntary compliance does not work, there ought to be several means of enforcing notice and participation in a timely and constructive fashion, such as administrative sanctions, injunctive relief, and civil and criminal penalties.[66]

The bill provided that within three years, states must "consider" adopting all the provisions of the Act, which contained variations of the elements described above. Although the 1995 pipeline safety reauthorization bill currently being reviewed in Congress does not include a one-call provision, except to add criminal liabilities for failure to report excavation damage to a pipeline, several one-call notification bills have been introduced in Congress during 1995.[67]

The Pipeline Safety Reauthorization Act of 1988 also authorized the DOT to require pipeline personnel engaged in the operation and maintenance of pipeline facilities to be tested for qualifications and certified to operate and maintain those facilities.[68] In August 1994, the DOT issued a proposed rulemaking to require training, testing and retesting of pipeline personnel performing "covered functions."[69] The proposed rule prescribes in detail minimum training requirements, competency reviews of personnel involved in accidents, and refresher training every two years.[70] The proposed rule includes not only pipeline personnel performing "covered functions," but also "supervisors" and contractors engaged by the operator.[71] There has been considerable resistance from the pipeline industry to the

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percentage of failures resulting from outside-force damage is predominantly higher on the natural gas pipeline side of the industry, though liquid lines are likewise at high risk of suffering from the same.

65. *See* Comprehensive One-Call Notification Act of 1994, H.R. 4394, 103d Cong., 2d Sess. (1994). *See also* H.R. Rep. No. 765, 103d Cong., 2d Sess. pt. 2 (1994). The bill passed the House, but not the Senate, during the 1994 session before adjournment of the 103rd Congress. The RSPA has also proposed regulations that would require operators of gas pipelines to participate in state one-call damage prevention programs that meet certain minimum federal standards. *See* 60 Fed. Reg. 14,714 (1995).

66. *Underground Infrastructure Protection: Hearings on S. 2191 Before the Senate Comm. on Commerce, Science and Transp.*, 103d Cong., 2d Sess. 2-3 (1994) (statements of William P. Boswell and William G. Kiger).

67. *See* S. 164, 104th Cong., 1st Sess. (1995); H.R. 431, 104th Cong., 1st Sess. (1995); H.R. 1126, 104th Cong., 1st Sess. (1995).

68. Pub. L. No. 100-561, 102 Stat. 2805 (1988) (current version at 49 U.S.C.A. § 60102(a)(1)(c) (West Supp. 1995)).

69. 59 Fed. Reg. 39,506 (1994).

70. *Id.*

71. *Id.* at 39,514.

OPS's prescription of training requirements, which is an example of the type of "command and control" regulation now being reassessed by Congress. In comments to the proposed rule, industry argued that while the OPS is the appropriate party to dictate the minimum levels of personnel qualifications, the industry is best suited to determine how its employees will meet those levels. The industry therefore believes that the OPS should not dictate how the pipeline employer trains its employees, so long as the employees can meet the minimum qualifications.

4. Drug and Alcohol Testing

Although not mandated by the 1988 amendments, in 1988 the RSPA promulgated drug testing rules applicable to operators of pipeline facilities,[72] pursuant to its broad authority to regulate pipeline safety under the NGPSA and the HLPSA. These regulations are also a product of the "command and control" philosophy of regulation. Although the RSPA had no basis to believe that there was a drug abuse problem among pipeline personnel, it nevertheless was concerned about drug use statistics in the general population, which the RSPA assumed were similar for pipeline personnel.[73] The rules require mandatory drug testing of employees before employment, after accidents, whenever there is reasonable cause to believe an employee is using a prohibited drug, after rehabilitation, and randomly.[74] In comments regarding the proposed rule and in petitions for reconsideration, the pipeline industry argued that mandatory drug testing violated the Fourth Amendment prohibition against unreasonable searches.[75] Relying on two United States Supreme Court decisions that were decided after the issuance of the final rules,[76] the RSPA conceded that the drug tests were "searches," but asserted that these searches were reasonable under the balancing test set out by the Supreme Court.[77]

In 1994, the DOT issued regulations to implement the Omnibus Transportation Employee Testing Act of 1991, which required alcohol as well as drug testing in certain transportation industries, not including the pipeline

72. The rule became effective, depending upon the size of the facility, in April or August of 1990. 54 Fed. Reg. 14,922 (1989); 54 Fed. Reg. 51,842 (1989).

73. 53 Fed. Reg. 25,892 (1988).

74. 49 C.F.R. § 199.11 (1989).

75. 53 Fed. Reg. 47,084 (1988); 54 Fed. Reg. 51,842 (1989).

76. Skinner v. Railway Labor Executives' Ass'n, 489 U.S. 602 (1989); National Treas. Employees Union v. Von Raab, 489 U.S. 656 (1989).

77. 54 Fed. Reg. 51,842 (1989). The Court of Appeals for the Ninth Circuit then upheld the RSPA's rule mandating random drug testing against allegations that the rule violated the Fourth Amendment. International Bhd. of Elec. Workers v. Skinner, 913 F.2d 1454 (9th Cir. 1990). In balancing the "individual's privacy expectations against the Government's interests to determine whether it is impractical to require a warrant or some level of individualized suspicion," the court found a compelling interest in the "detection and deterrence" of substance abuse among pipeline employees, despite the absence of evidence of a widespread drug problem in the industry. *Id.* at 1462-63. With respect to the individual's expectations of privacy, the court found that due to the potential safety hazards of the industry, pipeline employees have a diminished expectation of privacy, and although random drug testing is intrusive, it is not so great an intrusion as to warrant striking down the rule. *Id.* at 1463-64.

industry. At the same time, the RSPA issued regulations requiring pipeline operators to implement an alcohol testing program pursuant to its existing authority under the NGPSA and the HLPSA.[78] Those regulations prohibit covered employees from using alcohol while on duty, four hours before duty, and eight hours after an accident, and employees are prohibited from working on "covered functions" whenever the employee's blood alcohol concentration is greater than .04.[79] The rule also requires operators to maintain a written alcohol misuse plan and to conduct alcohol tests on "covered employees" after accidents and whenever the operator reasonably suspects that an employee has violated the prohibitions in the rule.[80]

5. The 1990 Amendments: Offshore Pipelines

Approximately 18,300 miles of oil and gas pipelines are located in the Outer Continental Shelf.[81] These pipelines are jointly regulated by the DOT and the Minerals Management Service (MMS), an agency of the Department of Interior.[82] In 1990, Congress amended the NGPSA, the HLPSA and the Ports and Waterways Safety Act to require operators of offshore gas or hazardous liquid pipeline facilities located in the Gulf of Mexico to inspect their pipelines and to report any portion of a line that is exposed or is a hazard to navigation.[83] The DOT issued final rules to implement the amendments in 1991.[84] Once again, these amendments were enacted in response to pipeline accidents. The two accidents that prompted congressional action occurred in the Gulf of Mexico and involved fishing vessels that struck a natural gas pipeline, resulting in several deaths.[85] Congress intended these amendments to improve navigational safety. In 1992, Congress also amended the NGPSA to require the DOT to establish a "mandatory, systematic, and where appropriate, periodic inspection program" of offshore pipelines and other facilities in or over navigable waters, if the location in the navigable waters could pose a hazard to navigation or public safety.[86] The amendments expand the offshore inspection program to operators of offshore pipelines not located in the Gulf, who will be required by October 1995 to inspect their facilities

78. 59 Fed. Reg. 7426 (1994).

79. 49 C.F.R. pt. 199 (1994).

80. 49 C.F.R. §§ 199.202, .255 (1994).

81. 60 Fed. Reg. 27,546 (1995).

82. Pursuant to a 1976 Memorandum of Understanding (MOU), the DOT and the MMS divided their responsibilities over offshore pipelines. 41 Fed. Reg. 23,746 (1976). The DOT and the MMS currently have proposed to revise the MOU to re-assign these responsibilities, the effect being that more offshore pipelines will come within the jurisdiction of the MMS. *See* 60 Fed. Reg. 27,546 (1995).

83. Pub. L. No. 101-599, 104 Stat. 3038 (1990) (current version codified in scattered sections of 49 U.S.C.A.).

84. 56 Fed. Reg. 63,764 (1991). MMS regulations addressing offshore pipelines and other facilities are contained in 30 C.F.R. pt. 250 (1994).

85. H.R. Rep. No. 814(I), 101st Cong., 2d Sess. (1990), *reprinted in* 1990 U.S.C.C.A.N. 4333.

86. Pub. L. No. 102-508, 106 Stat. 3289 (1992) (current version at 49 U.S.C.A. § 60108(c)(2)(A) (West Supp. 1995)).

and report any exposed portion or element of the facility that is a hazard to navigation.[87]

6. The 1992 Amendments: Smart Pigs and EFVs

The 1992 amendments required the DOT to issue new safety regulations mandating the use of instrumented internal inspection devices and specifying circumstances when excess flow valves (EFVs) must be used.[88] Instrumented internal inspection devices (referred to as "smart pigs")[89] are used to identify high risk pipelines with hidden internal deficiencies. The 1988 amendments had required the RSPA to publish a study assessing the feasibility of requiring industry to inspect its transmission facilities with smart pigs to help identify internal corrosion of pipelines.[90] Before the RSPA was able to publish the study,[91] Congress again amended the NGPSA in 1992 and required the Secretary of Transportation to issue regulations that require periodic inspection by internal inspection devices or other equivalent means of gas transmission facilities and hazardous liquid pipelines in high-density population areas and the inspection of hazardous liquid pipelines in environmentally-sensitive areas and crossing navigable waterways.[92] The RSPA has not finalized these rules, and it has only recently finalized rules in response to the 1988 amendments.[93]

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87. 49 U.S.C.A. § 60108(c)(5)(B) (West Supp. 1995).

88. Pub. L. No. 102-508, 106 Stat. 3289 (1992) (current version codified in scattered sections of 49 U.S.C.A.). In addition, the DOT's jurisdiction was expanded to include protecting the environment. *See infra* text accompanying notes 119-124.

89. As explained in the legislative history accompanying the 1992 amendments:

> Smart pigs are devices that are put in the pipeline and travel through it with the flow of product, measuring the thickness of the wall of the pipe. When the pig is retrieved, it produces a record of its measurements. Current pig technology is good at detecting certain conditions and certain types of flaws in the pipe, including corrosion damage. Pipeline operators can use smart pigging to identify places where pipe needs to be repaired, replaced or closely monitored. Smart pigs are one of several tools which pipeline operators use to preserve the integrity of pipelines. The smart pig's comparative advantage is that it provides a warning of problems before they actually become leaks. Some other damage prevention measures that pipeline operators employ are hydrostatic testing (pressurizing a pipeline with water), cathodic protection (using electricity to prevent corrosion), and one-call systems. Each of these is useful in different ways.

H.R. Rep. No. 247(I), 102d Cong., 2d Sess. (1992), *reprinted in* 1992 U.S.C.C.A.N. 2643, 2650.

90. In assessing feasibility, the DOT was required to consider the following factors: (1) the location of the pipeline facilities; (2) the type, size, age, manufacturer, method of construction, and condition of the pipeline facilities; (3) the nature and volume of the materials transported through the pipeline facilities and the pressure at which they are transported; (4) the climatic, geologic, and seismic characteristics of, and conditions (including soil characteristics) associated with, the areas in which the pipeline facilities are located, and existing and projected population and demographic characteristics associated with such areas; (5) the frequency of leaks, if any; and (6) any other factors determined by the Secretary to be relevant to the safety of the pipeline facility. *See* DEPARTMENT OF TRANSP., INSTRUMENTED INTERNAL INSPECTION DEVICES: A STUDY MANDATED BY PUB. L. 100-561, at 8-10, 28-36 (1992).

91. The RSPA published the study in November 1992, shortly after the 1992 amendments.

92. Pub. L. No. 102-508, 106 Stat. 3289 (1992).

93. 49 C.F.R. pts. 190, 192, 193, 195 (1994). In response to industry petitions for reconsideration of, among other things, requirements related to the definition of liquid replacement lines, the OPS

EFVs are designed to shut off the flow of gas in a service line[94] by closing automatically when the line is broken. Service line incidents, which are primarily caused by excavation damage, continue to be a serious problem on natural gas distribution service lines. The NTSB had made a number of recommendations regarding the use of EFVs based upon its investigations of a series of accidents since 1971.[95] The NTSB concluded that several of the accidents could have been prevented if EFVs had been installed. The OPS issued an Advance Notice of Proposed Rulemaking soliciting public comment on whether operators should be required to install EFVs on service lines to improve safety and reduce the frequency of incidents.[96] The RSPA failed to publish a proposed rule on the use of EFVs and, consequently, Congress intervened in 1992 to require the RSPA to issue regulations to establish performance standards for EFVs and prescribe the circumstances, if any, where they must be installed in gas distribution systems.[97] As a result, in 1993 the OPS published a Notice of Proposed Rulemaking that proposed to require the installation of EFVs on certain new and replaced gas service lines to improve safety and mitigate the consequences of service line incidents. The RSPA has recently concluded, however, that "there are no circumstances under which the RSPA should issue a federal rule requiring the universal installation of EFVs," although the RSPA will issue performance standards for EFVs and customer notification requirements to encourage the use of EFVs where appropriate.[98]

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issued a new notice of rulemaking. The new rule proposes to modify the final rule with respect to: (1) replacements in gas transmission lines located in less-populated areas; and (2) replacements in gas transmission lines located offshore. *See* 59 Fed. Reg. 49,896 (1994) (to be codified at 49 C.F.R. pts. 192, 195). Extensive comments were received, including a recommendation from the TPSSC that the RSPA reconsider its latest proposal. As a result, the RSPA has issued a limited stay of enforcement. *See* 60 Fed. Reg. 7133 (1995) (to be codified at 49 C.F.R. § 192).

94. A service line is defined as "a distribution line that transports gas from a common source of supply to (a) a customer meter or the connection to a customer's piping, whichever is farther downstream, or (b) the connection to a customer's piping if there is no customer meter." 49 C.F.R. § 192.3 (1988).

95. For example, the NTSB recommended that the RSPA " '[r]equire the installation of excess flow valves on new and renewed single-family, residential high pressure service lines which have operating conditions compatible with the rated performance parameters of at least one model of commercially available excess flow valve.' " 55 Fed. Reg. 52,188, at 52,189 (1990).

96. The OPS considered three courses of action: (1) require the installation of EFVs in all new and existing service lines over an appropriate period of time; (2) require the installation of EFVs in all new and replaced service lines operating at 10 psig and above; or (3) make no changes to the existing regulations. 55 Fed. Reg. 52,188 (1990). Under (2) above, the installation of the EFV would be required if the service line connection to the main distribution line is uncovered. *Id.*

97. 49 U.S.C.A. § 60,110 (West Supp. 1995). In addition, this provision requires the operator to notify its customers with lines for which EFVs are not required, but can be installed, of: (A) the availability of excess flow valves for installation in the system; (B) safety benefits to be derived from installation; and (C) costs associated with installation. *Id.* The operator will be required to install excess flow valves at the request of the customer if the customer agrees to pay all costs associated with installation. *Id.*

98. H.R. Rep. No. 110, 104th Cong., 1st Sess., pt. 1, at 14-15 (1995).

C. *Preemption and State and Local Interests*

1. Preemption

The NGPSA provides:

> A State authority that has submitted a current certification . . . may adopt additional or more stringent safety standards for the intrastate pipeline facilities and intrastate pipeline transportation only if those standards are compatible with the [federal] minimum standards. . . . A state authority may not adopt or continue in force safety standards for interstate pipeline facilities or interstate pipeline transportation.[99]

The NGPSA preemption of state pipeline safety legislation was first tested in *United Gas Pipe Line Co. v. Terrebonne Parish Police Jury*,[100] where a local ordinance purported to regulate the construction and operation of liquid petroleum interstate pipelines. The court held that, even if the ordinance contained safety standards identical to the federal minimum safety standards, the ordinance was nevertheless unconstitutional because Congress completely preempted state safety regulation of interstate pipelines.[101] In *Tenneco, Inc. v. PSC of West Virginia*, however, the Fourth Circuit made it clear that the NGPSA does not preempt states from regulating aspects of interstate pipelines other than safety.[102] In that case, the court upheld a state law that assessed fees on interstate pipelines for the purpose of defraying the costs of the state's share of the pipeline safety program.[103] Similarly, the Ninth Circuit in *Shell Oil Co. v. City of Santa Monica* refused to prohibit a municipality from imposing *all* safety standards in a franchise agreement with an intrastate pipeline, and instead remanded the case in part for the lower court to determine whether the particular safety standards at issue conflicted with the federal minimum standards.[104]

More recently, a court has resolved another preemption issue under the NGPSA. In *Kinley Corp. v. Iowa Utilities Board*,[105] the Iowa Utilities Board sought to regulate certain interstate pipelines that were, at the time, exempt from the HLPSA regulations. Therefore, the Board argued, state regulation of those pipelines, which functioned as "gap-filling" regulation, was not preempted. The court rejected this argument, stating that:

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99. 49 U.S.C.A. § 60104(c) (West Supp. 1995).

100. 319 F. Supp. 1138 (E.D. La. 1970), *aff'd*, 445 F.2d 301 (5th Cir. 1971).

101. 319 F. Supp. at 1141. *See also* Northern Border Pipeline Co. v. Jackson County, 512 F. Supp. 1261 (D. Minn. 1981); Natural Gas Pipeline Co. v. Railroad Comm'n, 679 F.2d 51 (5th Cir. 1982); ANR Pipeline Co. v. Iowa State Commerce Comm'n, 828 F.2d 465 (8th Cir. 1987) (holding that states are prohibited from adopting safety standards applicable to interstate pipelines that are identical to the federal standards).

102. 489 F.2d 334 (4th Cir. 1973), *cert. denied*, 417 U.S. 946 (1974). *See also ANR Pipeline Co.*, 828 F.2d at 473 (stating in dicta that state regulations concerning environmental impacts of pipeline construction are not preempted by the NGPSA as long as they do not conflict with the federal regulations).

103. *Tenneco*, 489 F.2d at 339. The state was authorized to exercise safety jurisdiction to inspect, but not to enforce safety standards as to, interstate pipelines as an agent of the Secretary of Transportation under what was then 49 C.F.R. § 190.6(a) (1973). *Id.* at 340.

104. 830 F.2d 1052 (9th Cir. 1987).

105. 999 F.2d 354 (8th Cir. 1993).

> [T]he decision of the Department of Transportation to exempt certain pipelines from federal regulation does not necessarily mean that the state can step in and impose its own regulations. "[A] federal decision to forego regulation in a given area may imply an authoritative federal determination that the area is best left unregulated, and in that event would have as much preemptive force as a decision to regulate."[106]

We are likely to see more federal preemption cases decided under the NGPSA as states and local governments continue to assert jurisdiction over pipeline safety matters.[107]

2. State and Local Interests

Because state pipeline safety regulations must be "compatible" with the federal regulations, the states have a strong interest in the effectiveness of the federal regulations. The National Association of Pipeline Safety Representatives (NAPSR) is a non-profit organization of state gas pipeline safety directors, managers, inspectors, and technical personnel who serve to develop and enhance pipeline safety regulations. NAPSR annually holds a national meeting and five regional meetings (corresponding to the five OPS regions) annually and submits resolutions that identify serious pipeline safety concerns for the RSPA to consider.[108]

Although local governments are concerned about the safety of pipelines traversing their districts, other entities have expressed concern about local government's land use and planning decisions. It is not uncommon for a town or city to develop near a pre-existing pipeline, as was the case in Edison, New Jersey, discussed *infra*. In 1984, in response to an investigation of a liquid pipeline accident near a residential area, the NTSB suggested that the OPS consider future action to improve public safety as it relates to people near pipelines, including: (1) instituting restrictions on the use of land adjacent to pipelines; (2) imposing requirements on pipeline operators to inform prospective users about the existence and potential hazards of nearby pipelines; (3) studying the role of federal, state, and local governments concerning land use planning for land adjacent to pipelines; and (4) determining the types of information that should be communicated to prospective users about adjacent pipelines.[109]

Recognizing the need for special expertise, the NTSB recommended that the Transportation Research Board (TRB) of the National Academy of Sciences assess the adequacy of existing public policy for surface and subsurface use of land adjacent to pipelines that transport hazardous commodities and develop a policy to improve the public policy where found deficient in protecting the public safety. As a result, in 1988, the TRB

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106. *Id.* at 359 (quoting Arkansas Elec. Co-op Corp. v. Arkansas Pub. Serv. Comm'n, 461 U.S. 375, 384 (1983)).

107. *See infra* note 155.

108. *See* 58 Fed. Reg. 59,431 (1993) (to be codified at 49 C.F.R. pt. 192).

109. NATIONAL TRANSP. SAFETY BD., PIPELINE ACCIDENT REPORT: TEXAS EASTERN CORPORATION NATURAL GAS PIPELINE EXPLOSION AND FIRE, EDISON, NEW JERSEY, MARCH 23, 1994, at 66-67 (1995).

issued Special Report 219,[110] which provided a synthesis of policies and practices for enhancing public safety near pipelines through damage prevention programs, land use measures, and emergency preparedness programs. Special Report 219 recommended that decisions regarding appropriate land use near pipelines continue to be made at the local level of government. The NGPSA reauthorization bill now pending in Congress proposes that the Secretary make this report available to the states, evaluate the report and consider initiatives regarding issues involved with population encroachment in proximity to pipelines.[111]

In 1990, the OPS also reviewed Special Report 219 as part of its consideration of a proposal to prohibit new pipelines from being built within 150 feet of any permanently inhabited facility and concluded that:

> [I]n view of the high costs of obtaining and controlling the use of a 300-foot wide corridor for pipelines, the speculative benefit of such a corridor, and the traditional role of local governments in making land development decisions, it is not appropriate for the Federal Government to prescribe a minimum setback distance between pipelines and buildings."[112]

The OPS believes that local governments are in a better position to balance the costs of such a decision against the anticipated benefits to the community. Consequently, the proposal was withdrawn from further consideration.[113]

III. THE TRANSITION

During the 1980s and early 1990s, a number of incidents primarily related to the transportation of oil served to heighten public and governmental awareness of the risks associated with pipeline transportation, specifically, the potential for environmental damage. The concern about the risk of environmental damage from oil pipeline spills grew to envelop natural gas pipeline transportation, although the environmental risks associated with gas are different, and arguably less threatening than those associated with oil.[114]

A. Oil-Related Accidents and Environmental Protection

In 1988, corrosion was found on the Trans-Alaska Pipeline System (TAPS), an 800-mile long oil pipeline traversing the environmentally-sensitive area from Alaska's North Slope to Port Valdez. Media and congressional interest led to a 1989 report by the Government Accounting Office,

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110. TRANSPORTATION RESEARCH BD., NATIONAL ACADEMY OF SCIENCES, SPECIAL REPORT 219: PIPELINES AND PUBLIC SAFETY (1988).

111. H.R. 1323, 104th Cong., 1st Sess. § 18 (1995).

112. 55 Fed. Reg. 23,514 (1990) (to be codified at 49 C.F.R. 192, 195).

113. *Id.*

114. *See* H.R. REP. NO. 247(I), 102d Cong., 1st Sess. (1991), *reprinted in* 1992 U.S.C.C.A.N. 2642, 2660 (letter from Acting General Counsel of the DOT to the Chairman of the Committee on Energy and Commerce urging him not to expand the DOT's responsibilities to include environmental protection from natural gas releases because the DOT "is unaware of any environmental risks associated with the transportation of natural gas by pipeline").

which was critical of both Alyeska as the pipeline operator and the nine states and two federal agencies responsible for environmental and safety compliance.[115] Although the 8.5 miles of heavily corroded pipe in the Atigun River Floodplain were replaced, public and congressional attention resulted in what George Tenley, then-Associate Administrator for Pipeline Safety, described as a "cultural change" in the way TAPS is overseen and operates, including a collaborative undertaking between Alyeska and the relevant agencies to develop a state-of-the-art cathodic protection program, which signalled a change from the typical adversarial relationship which existed.[116]

The Exxon Valdez spill also helped focus attention on the protection of the environment from pipeline accidents. On March 24, 1989, the Exxon Valdez spilled over ten million gallons of crude oil into Alaskan waters. As a result of this spill and other catastrophic oil spills, President Bush signed into law the Oil Pollution Act of 1990 (OPA).[117] Although the Exxon Valdez spill occurred as a result of a vessel accident, the OPA established a comprehensive oil spill prevention, response, liability and compensation scheme applicable to pipelines, as well as vessels, offshore facilities and certain onshore facilities.[118]

These oil-related accidents were in part responsible for congressional amendments to require all pipeline operators to protect the environment from the risks of pipeline transportation and accidents. Prior to the 1992 amendments, the DOT's jurisdiction was limited to issuing safety regulations governing pipeline transportation to protect property or the public. In 1992, however, Congress expanded the DOT's responsibility under both the NGPSA and the HLPSA to include environmental protection, despite the DOT's formal opposition to assuming environmental authority over the

115. *Joint Meeting Transcript, supra* note 5, at 110.

116. *Joint Meeting Transcript, supra* note 5, at 111.

117. Pub. L. No. 101-380, 104 Stat. 484 (1990) (codified as amended in scattered sections of 33 U.S.C.). In 1991, President Bush delegated authority to the Secretary of Transportation to establish requirements for the prevention of and response to oil and hazardous substance pipeline spills. Exec. Order No. 12,777, 3 C.F.R. 351 (1992), *reprinted in* 33 U.S.C. §§ 2701-2719 (Supp. 1992). The Secretary, in turn, delegated this responsibility to the RSPA. 49 C.F.R. § 1 (1994). By contrast, authority to establish requirements for the prevention of and response to oil and hazardous substance spills from offshore pipelines was delegated to the Department of the Interior's Minerals Management Service (MMS). *Id.*

118. Other pipeline oil spill accidents also served to increase the public's concern for protecting the environment from pipeline accidents. For example, on December 19, 1991, 420,000 gallons of diesel fuel spilled from Colonial Pipeline's line in Simpsonville, South Carolina, causing environmental pollution that affected 26 miles of waterways, thus forcing nearby homeowners to use alternate supplies of water. Lucy Soto, *S.C. Towns Find Alternate Water Sources After Oil Spill*, The Associated Press, Dec. 22, 1991; *Oil Spill Taints Water Supply*, United Press International, Dec. 22, 1991. On March 28, 1993, more than 2.6 million gallons of diesel fuel spilled from Colonial Pipeline's line in Reston, Virginia and flowed into Sugarland Run Creek, a tributary of the Potomac River, thereby causing environmental pollution which threatened the water supply of areas in Virginia, Maryland and the District of Columbia. D. Vera Cohn, *Safeguards Faulted in Spills; U.S. Rules Fail to Protect the Environment, Critics Say*, WASH. POST, March 30, 1993 at A1; D. Vera Cohn, *Officials Say Oil Pipeline Spill Could Have Disrupted Water Supply*, WASH. POST, May 18, 1993, at B5. Colonial Pipeline used its OPA-required emergency response plan to respond to the spill. 17 Chem. Reg. Rep. (BNA) 105, 106 (1993).

transportation of natural gas.[119] The environmental amendments required the OPS to: (1) mandate that operators of gas and liquid pipelines submit reports on any condition that is a hazard to the environment;[120] (2) consider a hazardous liquid pipeline facility's proximity to "unusually sensitive environmental areas" when determining the frequency and type of inspection and testing required of operators;[121] (3) consider the extent to which the gas and liquid pipeline operator's inspection and maintenance plan protects the environment when determining whether the plan is adequate;[122] and (4) design any minimum safety standards for gas and hazardous liquid pipeline transportation and facilities necessary to protect the environment.[123] In addition, Congress authorized the DOT to issue an HFO if the DOT determined that a pipeline facility was "hazardous" to the environment.[124]

B. The Edison Accident

On March 23, 1994, as a result of third-party excavation activities, Texas Eastern Transmission Corporation's 36-inch diameter natural gas pipeline ruptured in Edison, New Jersey (a suburb of Newark, New Jersey), creating a fire that destroyed eight apartment buildings.[125] Due to prompt evacuation, no fatalities occurred among the apartment complex residents, and only minor physical injuries were suffered by some persons nearby the accident site.[126] This event, and the displacement of hundreds of apartment dwellers at the doorstep of New York City, received widespread media coverage on the East Coast, drawing the immediate attention of the political establishment in Washington, D.C., as well as state and local governments.

On June 20, 1994, in response to the Edison, New Jersey incident, the RSPA convened a National Pipeline Safety Summit in Newark, New Jersey, which brought together federal, state and local government officials,

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119. *See* H.R. REP. NO. 247(I), 102d Cong., 1st Sess. (1991), *reprinted in* 1992 U.S.C.C.A.N. 2642, 2660 (reporting that the DOT was not aware of any environmental problems associated with natural gas pipeline transportation).

120. 49 U.S.C.A. § 60102(h) (West Supp. 1995).

121. *Id.* § 60108(b)(1)(G).

122. *Id.* § 60108(a)(2)(D).

123. *Id.* § 60102(b).

124. *Id.* § 60112(a)(1).

125. While the Edison incident received considerable media attention, other incidents both prior to and after the accident have also contributed to a growing uneasiness on the part of local governments. *See supra* note 118. For example, quite recently,

> [a]s the result of unprecedented flooding of rivers and streams in the Houston area, seven natural gas and hazardous liquid pipelines failed in or near the San Jacinto River over the three day period of October 19-21, 1994. . . . While no determination has been made as to the cause of failure regarding any of these lines, the RSPA and the Texas Railroad Commission believe that the extreme flooding by the San Jacinto River was probably a substantial contributing factor in each of the failures.

Pipeline Safety Advisory Bulletin ADB-94-05, 59 Fed. Reg. 55,152, at 55,153 (1994).

126. However, one person who had a history of heart problems and who was remote from the accident area died of a heart attack, reportedly while viewing the fire from her residence. *Id.*

the pipeline industry, academia, environmental groups, businesses, and the general public. The Summit was designed to develop a public/private agenda which would establish priorities in pipeline safety initiatives and identify the steps necessary to implement those initiatives. At the Summit, Secretary of Transportation Peña unveiled his vision of the new pipeline safety program:

> (1) Every pipeline in the country is tested and rehabilitated, if necessary, to assure its safety;
> (2) Every state has an adequate one-call system;
> (3) New technologies are applied to monitor pipelines so that virtually any serious flaw can be detected;
> (4) Every community has land use policies which take into account the existence of pipelines and avoid dig-ins; and
> (5) The federal government's pipeline program enjoys strong public confidence and trust as an independent, competent, and credible assessor of the nation's pipeline infrastructure with the means and the will to address any risks that arise.[127]

After the Secretary spoke, four topics were presented for discussion: (1) allaying public concerns about pipeline safety; (2) using existing and evolving technologies to maximize pipeline safety; (3) calculating the cost of pipeline safety; and (4) creating effective partnerships for reducing pipeline risks. As a result of the Summit, a report was issued identifying the OPS actions necessary to implement the findings and recommendations of the Summit. In the report, the OPS outlined its Summit Action Agenda, which included the following:

> (1) Seek the participation of the public in pipeline safety regulatory actions and other OPS initiatives;
> (2) Develop and fund a collaborative research agenda with industry that focuses on getting useable technology into the field as soon as feasible;
> (3) Initiate national public education on excavation damage prevention;
> (4) Implement a risk management-based pipeline safety program;
> (5) Initiate a pipeline mapping program to enhance safety planning, decision making, and emergency response; and
> (6) Improve the OPS's information and data-gathering capabilities to support programs such as mapping and one-call.[128]

It can be expected that these initiatives will define the content and direction of the pipeline safety program in the Post-Edison era.

IV. THE EMERGENCE OF A NEW PARADIGM: THE POST-EDISON ERA

The public's fear and perception of sensational pipeline accidents historically has played a large part in directing the congressional pipeline safety agenda. Neither Congress nor the DOT have devoted much analysis to the nature, magnitude or probabilities of the risk proposed to be regulated, a comparison of that risk to others within the industry, or the benefits expected to be derived from regulating the risk. When the Edison

127. For further discussion of Summit proceedings, see JOINT TPSSC AND THLPSSC MEETING, REPORT ON THE NATIONAL PIPELINE SAFETY SUMMIT (Nov. 3, 1994) (the authors attended the Summit).

128. *Id.*

accident occurred, however, the response was different. The oil spills and the new awareness of pipeline risks to the environment played a part in prompting a change in the way pipeline risks are evaluated. The Edison accident, however, and its coincidence with a renewal of interest in the application of risk assessment and risk management principals to environmentally regulated industries, was in large measure responsible for the DOT's, and ultimately Congress's, acceptance that the issuance of more regulations would not necessarily eliminate all pipeline risks, and in any event, the total elimination of such risks is not feasible. Once these principles had been accepted, the DOT and Congress were free to reassess whether the compliance-based model was the most effective and efficient approach, given the finite resources of the DOT and the industry, to regulate the pipeline industry. The Committee on Transportation and Infrastructure in its report on H.R. 1323 explained:

> In the past decade, Congress has directed the Secretary to issue certain regulations on a variety of safety measures and prescribed the contents and coverage of certain regulatory actions in detail. Legislation was largely driven by successive reactions to particular accidents, whereby Congress would impose additional prescriptions on the industry to remedy the perceived safety problems. In this time period however, these regulatory actions have had varying impacts on overall pipeline safety; the industry's record remained consistently excellent. . . .
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> . . . .
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> . . . [The] OPS and the pipeline industry have both proposed to move the program away from the prescriptive model towards a risk-based approach. The Committee [on Transportation and Infrastructure] agrees, and has therefore taken the program towards a risk-based approach featuring risk assessment, risk management, and industry-agency partnership in this bill.[129]

Significantly, Congress has introduced a reauthorization bill for the NGPSA that proposes no new mandates to the DOT to issue more regulations. Instead, Congress is proposing to require the OPS to use risk assessment principles as the basis for regulatory action and to allow the DOT and industry to develop company-specific risk management plans, rather than requiring industry to comply with the traditional and otherwise applicable prescriptive regulations.

Risk assessment and risk management principles have long been a part of environmental decision-making[130] and are currently employed in a number of regulatory programs in various forms.[131] An early definition of these principles is as follows:

> Risk assessment is the use of the factual base to define the health effects of exposure of individuals or populations to hazardous materials and situations. Risk management is the process of weighing policy alternatives and selecting the most appropriate regulatory action integrating the results of risk assess-

129. H.R. REP. NO. 110, 104th Cong., 1st Sess., pt. 1, at 10 (1995).

130. *See* Donald T. Hornstein, *Reclaiming Environmental Laws: A Normative Critique of Comparative Risk Analysis*, 92 COLUM. L. REV. 562, 565 n.8 (1992).

131. *See* Eric W. Orts, *Reflexive Environmental Law*, 89 NW. U.L. REV. 1227 (1995) (discussing the inadequacies of the "command and control" approach to environmental regulation).

> ment with engineering data and with social, economic, and political concerns to reach a decision.[132]

Although it is too early to tell what form these principles ultimately will take in the pipeline safety program, the effort to incorporate a risk-based approach to regulation is underway in both the DOT and Congress and is supported by industry.

A. Risk Assessment

Risk assessment in the DOT currently has taken the form of a congressional proposal that requires the Secretary of Transportation to conduct a cost-benefit analysis and risk assessment of each new regulation that would cost more than $25 million.[133] Because Congress historically has responded to major pipeline accidents by requiring the DOT to issue more regulations to address the perceived risks that contributed to the accident, the DOT has been inundated with congressional mandates. As a result, the DOT has had little time to assess whether such risks merit prescriptive regulations, and if so, whether these risks should receive priority in resources over other identified risks. As the Committee on Commerce explained:

> The DOT has found it difficult to keep up with all the Congressional mandates. In fact, a significant number of rulemakings the DOT was required to perform under both the 1988 and 1992 reauthorizations have yet to be completed by the DOT. Both industry and the DOT have complained that the concept of just layering new Congressional mandates on top of old ones, each of which must be applied to all pipelines, ties up a large amount of resources and does not allow the DOT or the pipelines to identify and address those risks which pose the greatest threat to the public and the environment. Both the DOT and the pipeline industry agree that a "one size fits all" approach to pipeline safety is not cost-effective. . . .
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> . . . .
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> To address this problem, H.R. 1323 leaves in place current pipeline safety regulations, but requires the DOT to do a cost benefit analysis before issuing any new significant standards.[134]

The bill is based, in part, on H.R. 1022,[135] which requires all federal agencies to perform a cost-benefit analysis before issuing new regulations and is part of the GOP's so-called Contract with America program. Under H.R. 1323, before the Secretary may promulgate a regulation likely to result in annualized compliance costs exceeding $25 million, the Secretary must: (1) certify that the analysis of risk reduction benefits and costs is based on objective and unbiased evaluations of all relevant information; (2) certify that the incremental risk reduction or other benefit of the proposed rule will be likely to justify the incremental costs; and (3) explain why any alter-

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132. NATIONAL RESEARCH COUNCIL, RISK ASSESSMENT IN THE FEDERAL GOVERNMENT: MANAGING THE PROCESS 3 (1983). *See also* Donald A. Brown, *Superfund Cleanups, Ethics, and Environmental Risk Assessment*, 16 B.C. ENVTL. AFF. L. REV. 181, 181 (1988) (defining risk assessment as the "process that attempts to quantify the risk," and risk management as the "procedures employed to protect against the threats posed by the risk").

133. H.R. 1323, 104th Cong., 1st Sess. § 3 (1995).

134. H.R. REP. NO. 110, 104th Cong., 1st Sess., pt. 2, at 10-11 (1995).

135. H.R. 1022, 104th Cong., 1st Sess. (1995).

natives were either less cost-effective or less able to provide flexibility to involved governments and regulated entities.[136] H.R. 1323 requires the Secretary to consider the incremental costs and benefits of alternatives to the proposed regulation,[137] and to submit its risk assessment documents and cost-benefit analyses to the Technical Pipeline Safety Standards Committee for review and recommendations, as well as make them available to the public.[138] H.R. 1323 also requires the Secretary of Transportation to create procedures for reconsidering existing regulations under the risk assessment provisions.[139]

Along similar lines, but developed before the introduction of either H.R. 1022 or H.R. 1323, is the Risk Assessment Prioritization (RAP) process that the OPS is developing to help allocate its resources to tasks with "the greatest potential to improve public safety and protect the environment without causing an undue burden to the pipeline industry."[140] The RAP process includes steps to: identify issues affecting pipeline safety and environmental protection and their solutions, identify and rate each solution, calculate a risk reduction value for the solution, rank the risk reduction values, estimate the OPS's resource availability, assign resources, and prepare a risk-based action plan.[141] The OPS has identified 189 issues affecting pipeline safety, which are organized into five categories according to their probability of causing a pipeline accident.[142] These categories are: (1) design; (2) construction; (3) operations and maintenance; (4) corrosion; and (5) outside force.[143] The OPS has begun the second step of identifying solutions to the issues[144] and has solicited solutions to each of the issues from stakeholders.[145]

B. Risk Management

In addition to an NTSB national workshop on one-call initiatives[146] and the Pipeline Safety Summit itself, the OPS and Industry plan to work

136. H.R. REP. NO. 110, 104th Cong., 1st Sess., pt. 2 (1995).

137. *Id.* § 3(b).

138. *Id.* § 3(e).

139. H.R. REP. NO. 110, 104th Cong., 1st Sess., pt. 2, at 11 (1995). The risk management provisions of the bill also require the pipeline operator to apply risk assessment methodologies when developing the risk management plan.

140. 58 Fed. Reg. 51,402 (1993).

141. *Id. See also* 60 Fed. Reg. 7620 (1995).

142. 60 Fed. Reg. 7620, at 7621 (1995).

143. *Id.*

144. *Id.* at 7620.

145. *Id.*

146. The Edison, New Jersey failure resulted in the joint sponsorship by the DOT and the NTSB of a national workshop in Washington, D.C. on September 8 and 9, 1994. Representatives from almost every industry affected by excavation-related damage to pipelines and other buried facilities were among the 375 attendees. Four work groups were established to meet and exchange ideas on various elements they deemed necessary for effective one-call systems. The work groups concluded with recommendations which were reported to the group as a whole at the conclusion of the meeting. It is anticipated that the NTSB will use the information to generate a public report with potential recommendations on the mechanics of an effective one-call system.

together in a number of other areas, including research and, perhaps most importantly, risk management applications.[147]

George Tenley, the former OPS Associate Administrator, is credited with introducing the concept of risk management initiatives to the OPS. The current OPS Associate Administrator, Richard Felder, is also working toward changing the OPS from a compliance-based organization to a risk management-based organization.[148] Congress has joined the effort to incorporate risk management principles into the pipeline safety program with the introduction of the Pipeline Safety Act of 1995 (H.R. 1323), the proposed reauthorization bill for the NGPSA.[149] H.R. 1323 establishes a demonstration project for the purpose of allowing pipeline operators to develop risk management plans, with approval from the DOT, based on the operators' assessment of the risks associated with their pipelines. H.R. 1323 defines risk management as the "systematic application, by the owner or operator of a pipeline facility, of management policies, procedures, finite resources, and practices to the tasks of analyzing, assessing, and controlling risk in order to protect employees, the general public, the environment, and pipeline facilities."[150] The Committee on Commerce explained that:

> The concept behind risk management is that each pipeline operator knows his system best and this would give the operator the flexibility to accomplish the goal of pipeline safety while utilizing alternative technologies or techniques to those contemplated by current regulations.
>
> The purpose of the demonstration phase is to encourage [the] DOT to approve a variety of risk management approaches to pipeline safety that companies might propose in an effort to gain experience and demonstrate the effectiveness of this alternative to traditional regulation.[151]

During participation in this program, the Secretary will exempt owners and operators from regulatory requirements that would otherwise apply with respect to facilities included in this demonstration project.[152] The bill proposes that participating operators submit risk management plans that will achieve, as determined by the OPS, an equivalent or greater overall level of safety than would otherwise be achieved under existing regulations. The risk management plan must include the following elements: collaborative training, methods to measure plan performance, development and application of new technologies, promotion of community awareness, development of a model to categorize the risks inherent in a selected pipeline, taking into consideration certain facility and site-specific information, the application of risk assessment and risk management methodologies to the

147. For example, the OPS and the American Petroleum Institute formed a cooperative venture to evaluate the applicability of risk management programs within the liquid pipeline industry. THE JOINT GOVERNMENT/INDUSTRY RISK ASSESSMENT QUALITY TEAM, FINAL REPORT: RISK MANAGEMENT WITHIN THE LIQUID PIPELINE INDUSTRY (June 30, 1995).

148. *See generally Pipeline Safety: New OPS Associate Administrator Felder Says Managing Growth Presents Challenge*, 19 Chem. Reg. Rep. (BNA) 502 (1995).

149. The Senate has also introduced a reauthorization bill with its own version of risk management. *See* S. 836, 104th Cong., 1st Sess. (1995).

150. H.R. REP. NO. 110, 104th Cong., 1st Sess., pt. 2, § 4(a)(27) (1995).

151. *Id.* at 11-12.

152. *Id.* § 6(b).

inherent risks identified in the model above, and an audit of the risk management program at participating facilities. By March 31, 1999, the Secretary of the DOT is instructed to submit a report on the results of this demonstration project and recommend whether or not risk management application should be made a permanent part of the federal pipeline safety program.

Industry has also embraced risk management principles. The Interstate Natural Gas Association of America (INGAA), a trade association of industry, has adopted a Statement of Principles regarding risk management for the natural gas pipeline industry. INGAA's principles are as follows:

1. Risk management is a process that supports decision making to reduce risk, based upon sound engineering principles and good business practices.
2. Risk can be managed but cannot be eliminated.
3. Risk management programs should provide increased assurance that risks associated with natural gas pipeline systems are identified, analyzed, and appropriately managed.
4. Risk management programs should direct available resources to activities with the greatest potential for reducing risk.
5. Risk management programs should be flexible and adaptable, providing general principles, quidelines, and tools for managing risk.
6. Risk management programs should communicate to the public and other stakeholders that risks are being proactively and responsibly managed.[153]

Proponents of a formalized risk management program claim that adoption of such a program within the pipeline industry will have significant benefits to all stakeholders. The risk management process will allow the pipeline operator, with DOT approval, to evaluate alternatives for reducing risk and to determine which is the best method for that particular pipeline operator, given its unique characteristics, to manage and protect against an identified risk. Because not every pipeline faces the same risks to the same degree, this process will allow each pipeline operator to develop a risk management program appropriate to the specific risks of that pipeline system, thus allowing the operator to allocate resources to the risks of greatest magnitude or probability on that system. Moreover, granting the pipeline operator discretion in managing the risks should encourage the industry to seek better and more innovative technologies and methods of risk management. The prevention of costly accidents is in the pipeline operator's interest, and being freed from direct regulation, the operator presumably will seek to develop the most efficient and effective means of self-regulation possible. Finally, a risk management approach should reduce compliance costs, as well as administrative and enforcement costs. The Risk Assessment Quality Team, formed as a cooperative venture between OPS and the American Petroleum Institute to evaluate risk management applications within the liquid pipeline industry, concluded in its final report:

153. INGAA, *Statment of Principles, Risk Management for the Interstate Natural Gas Pipeline Industry* (on file with the authors).

> The expanded application of risk management within the pipeline industry will provide significant benefits to both the industry and government in identifying and managing the risks of the liquid pipeline industry and by communicating and demonstrating to all stakeholders the extent and manner in which current risks are being managed.[154]

C. *Increased Public and Local Government Participation*

During recent years, and particularly after the widely publicized incidents noted above, state and local governments have asserted with increasing vigor their need to be informed about the locations and nature of pipeline transportation. At the Summit, local government officials, including the mayor of Edison, New Jersey, and representatives of academia unanimously expressed a need for more public participation in the regulatory decision-making process. This concern may foreshadow increased jurisdictional battles between the federal and state/local governments and potential conflicts between private industry's business operations and the public's "right-to-know" demands.[155] A reassessment of the federal preemption doctrine and the relationship between interstate pipelines and local governmental entities is underway. In H.R. 1323, the current reauthorization bill, Congress proposes to require the Secretary to make the land use recommendations in Special Report 219 available to the states and to "determine to what extent the recommendations are being implemented, consider ways to improve implementation of the recommendations, and consider other initiatives to further improve awareness of local planning and zoning entities regarding issues involved with population encroachment in proximity to rights-of-ways of any interstate gas pipeline facility . . . ."[156] What appears to be evolving is an improved dialogue, through greater information sharing, between the federal government (playing the leadership role) and state and local governments. While federal preemption still prevails as to specific regulatory requirements, the federal partner is exhibiting its willingness to allow local control over mat-

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154. *See supra* note 147, at ES-5. Significant obstacles exist to the adoption of a risk managment process in the industry. George Tenley, the former Associate Administrator of OPS, and now with the Battelle Memorial Institute, believes these obstacles include a lack of trust among Congress, regulators and the industry, poor credibility of the industry and government with the public, the widespread belief that the industry has unlimited resources, and the concern in industry that risk managment will leave it "too exposed from the liability standpoint if an accident were to occur on a segment where the risk-based actions on that segment could be seen as a reduction in protection as a trade-off for stronger actions taken elsewhere on the operator's system." George W. Tenley, Jr., *The Challenges for Risk Management in the Pipeline Industry*, presented at the Pipeline Reliability Conference, Houston, Texas, Sept. 12-14, 1995, at 3.

155. For example, the City Council of Corpus Christi adopted an ordinance which requires pipeline operators to file annually "verified safety reports," maintain emergency reponse plans, schedule a public review period prior to any proposed pipeline construction, and other requirements which purport to regulate the safety of interstate pipelines. City of Corpus Christi Code of Ordinances, Ch. 35, art. VII (1994). After the recent flood in Houston (discussed above), the Port of Houston Authority plans on "tightening up its licensing procedures and beefing up its emergency response capacity." Debra Beachy, *Port Looks at Pipeline Policies After Blasts*, HOUS. CHRON., Nov. 23, 1994, at B1.

156. H.R. 1323, 104th Cong., 1st Sess. § 18 (1995).

ters such as siting, emergency response, and land use where it would not impede the federal program.

The increased public participation effort has received additional impetus from President Clinton's program to "reinvent Government." The President has directed regulators to "get out of Washington and create grassroots partnerships" with the stakeholders who are affected by the agency's regulations. As a result, the RSPA has issued a notice that it is reviewing its pipeline safety regulations and it has announced several informal public meetings "to produce a dialogue between agency personnel and those persons directly affected by the pipeline safety programs, regulations, and customer services."[157] The former Associate Administrator of Pipeline Safety was reported as predicting, on the eve of his retirement from government service, that " 'the next great challenge [after risk management] in pipeline safety for the industry and government' [will be] better, more effective, and greatly increased public awareness and participation in addressing pipeline risks."[158]

V. CONCLUSION

The pipeline industry essentially accepted the passage of the NGPSA in 1968 because it would provide one set of uniform regulations under the shield of federal preemption, thus relieving industry from the impossible burden of complying with inconsistent state and local requirements. The program developed, however, in response to the public's misperception of infrequent but highly publicized accidents, rather than as a result of rational evaluation of actual pipeline safety risks. Like other federal agencies, the DOT has begun to reassess this method of regulation and today has a new vision of pipeline safety regulation. The DOT has embarked on a regulatory experiment which requires government-industry partnerships, greater public participation, and risk-based regulations. Whether or not this experiment succeeds, the DOT deserves credit for seeking new and innovative approaches to regulating the pipeline industry.

157. 60 Fed. Reg. 17,295 (1995) (to be codified at 49 C.F.R. pts. 190-99).

158. *Pipeline Safety: Departing Associate Administrator Tenley Calls Risk Assessment Key to Future Programs*, 18 Chem. Reg. Rep. (BNA) 1793 (1995).