

July 2004

# PIPELINE SAFETY

## Management of the Office of Pipeline Safety's Enforcement Program Needs Further Strengthening



G A O

Accountability \* Integrity \* Reliability



Highlights of [GAO-04-801](#), a report to congressional recipients

# PIPELINE SAFETY

## Management of the Office of Pipeline Safety's Enforcement Program Needs Further Strengthening

### Why GAO Did This Study

While pipelines are inherently safer to the public than other modes of freight transportation, pipeline accidents involving natural gas and hazardous liquids (such as gasoline) can have serious consequences. For example, a natural gas pipeline ruptured near Carlsbad, New Mexico, in 2000, killed 12 people, and resulted in \$1 million in damages or losses. The Office of Pipeline Safety (OPS) administers the national regulatory program to ensure safe pipeline transportation. OPS uses its enforcement program, when safety problems are found, as one means to do so.

This study reports on (1) the effectiveness of OPS's enforcement strategy and (2) OPS's actions for assessing monetary sanctions (civil penalties), among other things.

### What GAO Recommends

GAO recommends that OPS define its enforcement goals and strategy and establish a systematic approach for designing new performance measures. GAO also makes several recommendations aimed at improving management control over the collection of civil penalties.

GAO provided a draft of this report to the Department of Transportation for its review and comment. The department generally agreed with the information in the report and its recommendations.

[www.gao.gov/cgi-bin/getrpt?GAO-04-801](http://www.gao.gov/cgi-bin/getrpt?GAO-04-801).

To view the full product, including the scope and methodology, click on the link above. For more information, contact Katherine Siggerud, (202) 512-2834, [siggerudk@gao.gov](mailto:siggerudk@gao.gov).

### What GAO Found

The effectiveness of OPS's enforcement strategy cannot be determined because the agency has not set goals for its enforcement program, fully defined its strategy, or established performance measures linked to goals that would allow an assessment of results. (See below.) These are key elements of effective management. Without these elements, the agency cannot determine whether recent changes in its strategy are having the desired effects on pipeline safety. Over the past several years, OPS has placed priority on other areas—developing a new risk-based regulatory approach—and it believes these efforts will change the safety culture of the industry. OPS now intends to devote more attention to strengthening the management of the agency's enforcement program. In particular, OPS is developing an enforcement policy that will help define its enforcement strategy and has made some initial steps toward identifying new performance measures. However, OPS does not anticipate finalizing such a policy until sometime during 2005 and lacks a systematic approach for incorporating some of the key practices identified for achieving successful performance measurement systems.

**Incorporation of Key Program Management Elements into OPS's Enforcement Strategy**

Element	Extent
Clear program goals	○
Well-defined strategy for achieving goals	◐
Performance measures linked to program goals	◑

● Fully incorporated    ◐ Partially incorporated    ○ Not incorporated

Source: GAO.

OPS has increased both the number and the size of the penalties it has assessed against pipeline operators over the last 4 years (2000 through 2003) following its decision to be "tough but fair" in assessing penalties. During this period, OPS assessed an average of 22 penalties per year, compared with an average of 14 per year for the previous 5 years (1995 through 1999), a period of more lenient enforcement. In addition, the average penalty amount increased from \$18,000 to \$29,000 over the two periods. While civil penalty use and size has increased, it is not clear whether this action will help deter noncompliance with the agency's safety regulations. Stakeholders expressed differing views: some thought that any penalty had a deterrent effect if it kept the pipeline operator in the public eye, while others told us that the penalties were too small to be effective sanctions. About 94 percent of the 216 penalties levied from 1994 through 2003 have been paid. However, OPS lacks effective management controls to assure that penalties are collected. For example, OPS does not routinely inform its collection agent of penalties it has assessed.

---

# Contents

---

<b>Letter</b>		1
	Results in Brief	3
	Background	6
	Key Management Elements Are Needed to Determine the Effectiveness of OPS's Enforcement Strategy	13
	OPS Has Increased Its Use of Civil Penalties; OPS and FAA Need Stronger Management Controls Over Collections	25
	Conclusions	34
	Recommendations for Executive Action	35
	Agency Comments and Our Evaluation	35

---

## Appendixes

<b>Appendix I: Scope and Methodology</b>	39
Other Aspects of Our Work	42
Organizations Contacted	44
<b>Appendix II: Other Pipeline Safety Enforcement Issues</b>	46
<b>Appendix III: OPS's Implementation of Recommendations Made in Our May 2000 Report</b>	52
<b>Appendix IV: OPS's Enforcement Policies Influenced Trends in Enforcement and Administrative Actions</b>	57
<b>Appendix V: Contacts and Staff Acknowledgments</b>	70
Contacts	70
Staff Acknowledgments	70

---

## Tables

Table 1: OPS's Enforcement and Administrative Actions	11
Table 2: Enforcement Program Performance Measures that OPS Currently Uses and Is Considering Developing	21
Table 3: OPS's Proposed and Assessed Civil Penalties, 1994 through 2003	26
Table 4: Reductions in OPS's Proposed Civil Penalties, 1994 through 2003	28
Table 5: OPS's and FAA's Regulations and Processes for Issuing Civil Penalties	49
Table 6: OPS's and FAA's Use of Civil Penalties, 1994 through 2002	51

---

## Figures

Figure 1: OPS's Use of Civil Penalties, 2000 through 2003 Compared with 1995 through 1999	5
---	---

Figure 2: Number of Accidents and Accident Rates for Interstate Hazardous Liquid Pipelines, 1994 through 2003	8
Figure 3: Number of Accidents on Interstate Natural Gas Pipelines, 1994 through 2003	9
Figure 4: OPS's Use of Selected Enforcement Actions in 1999 and 2003	15
Figure 5: Example of How OPS's Enforcement Strategy Contributes to Pipeline Safety	17
Figure 6: Operators' Payment of Civil Penalties, 1994 through 2003	32
Figure 7: OPS's Policy Eras and Enforcement and Administrative Actions, 1994 through 2003	56
Figure 8: OPS's Enforcement and Administrative Actions and Interstate Pipeline Accidents per 10,000 Miles of Pipeline, 1994 through 2003	59
Figure 9: OPS's Enforcement and Administrative Actions and Serious Interstate Pipeline Accidents, 1994 through 2003	60
Figure 10: OPS's Enforcement and Administrative Actions and Miles of Pipeline, 1994 through 2003	61
Figure 11: OPS's Enforcement and Administrative Actions and Number of OPS Inspectors, 1994 through 2003	62
Figure 12: OPS's Enforcement and Administrative Actions and Inspections Conducted, 1994 through 2003	63
Figure 13: OPS's Enforcement and Administrative Actions and Time Taken to Conduct Inspections, 1994 through 2003	64
Figure 14: OPS's Enforcement and Administrative Actions and Inspections Conducted, by Type of Inspection, 1994 through 2003	65
Figure 15: OPS's Enforcement and Administrative Actions and Natural Gas Consumption, 1994 through 2003	66
Figure 16: OPS's Enforcement and Administrative Actions and Petroleum Consumption, 1994 through 2003	67
Figure 17: OPS's Enforcement and Administrative Actions and New Privately Owned Housing Units Started, 1994 through 2003	68
Figure 18: OPS's Enforcement and Administrative Actions and the Total Value of Construction Put in Place, 1994 through 2003	69

---

**Abbreviations**

FAA	Federal Aviation Administration
OPS	Office of Pipeline Safety
RSPA	Research and Special Programs Administration

This is a work of the U.S. government and is not subject to copyright protection in the United States. It may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



July 23, 2004

### Congressional Recipients

While pipelines are inherently safer to the public than other modes of freight transportation, the volatile nature of the products they carry means that pipeline accidents can have serious consequences. For example, when a natural gas pipeline ruptured near Carlsbad, New Mexico, in 2000, the released gas ignited and killed 12 people. Property and other damages or losses totaled almost \$1 million.

The Office of Pipeline Safety (OPS), within the Department of Transportation's Research and Special Programs Administration (RSPA), administers the national regulatory program to ensure the safe transportation of natural gas and hazardous liquids by pipeline.<sup>1</sup> The office attempts to ensure the safe operation of pipelines through regulation, national consensus standards,<sup>2</sup> and oversight of the industry through inspections and enforcement actions when safety problems are found. The office uses a variety of enforcement tools, including some, such as compliance orders, that require pipeline operators to correct underlying safety violations. OPS may also impose monetary sanctions (civil penalties) on pipeline operators for violations of its pipeline safety regulations.

In May 2000, we reported, among other things, that OPS had reduced its use of civil penalties and increased its use of administrative actions (such as warning letters) without assessing the effects of these changes on pipeline safety compliance.<sup>3</sup> The Pipeline Safety Improvement Act of 2002 directed that we (1) evaluate the effectiveness of OPS's enforcement strategy and (2) examine OPS's assessment of civil penalties. These topics form the

---

<sup>1</sup>Hazardous liquid pipelines carry products such as crude oil, diesel fuel, gasoline, jet fuel, anhydrous ammonia, and carbon dioxide.

<sup>2</sup>Standards are technical specifications that pertain to products and processes, such as specifications setting the size, strength, or technical performance required of a product, process, or material. National consensus standards are specifications developed by standards-setting entities, such as the American Society for Testing and Materials, based on general agreement within an industry.

<sup>3</sup>U.S. General Accounting Office, *Pipeline Safety: The Office of Pipeline Safety is Changing How it Oversees the Pipeline Industry*, [GAO/RCED-00-128](#) (Washington, D.C.: May 15, 2000). This report contained three recommendations to make more effective use of state inspectors and evaluate the effect of OPS's reduced reliance on civil penalties.

---

major focus of this report. To meet other requirements of the act and your interests, we are also reporting on how OPS enforces pipeline safety and how its enforcement policies and procedures have changed over time, whether OPS substitutes civil penalties for another form of enforcement, and how OPS's use of civil penalties compares with that of the Federal Aviation Administration (FAA), which oversees aviation safety. These issues are discussed in appendix II. Finally, we are reporting on how the office responded to the recommendations in our May 2000 report and whether industry and economic trends have influenced OPS's enforcement actions. These issues are discussed in appendixes III and IV.

To evaluate the effectiveness of OPS's enforcement strategy, we determined the extent to which the office's strategy incorporates several elements that are important for effective program management: clear program goals, a well-defined strategy for achieving goals, and performance measures that are linked to program goals. We identified elements of effective program management by reviewing our products on this topic as well as other key literature, such as Office of Management and Budget guidance, on this subject. We interviewed OPS officials and reviewed documents about the agency's activities and plans related to each of these elements. We interviewed pipeline safety stakeholders, including industry trade associations, federal agencies, state pipeline agencies and associations, a local representative from Virginia, and pipeline safety advocacy groups, to determine their views on the effectiveness of OPS's enforcement efforts. To examine OPS's assessment of civil penalties against pipeline operators, we analyzed the extent to which OPS proposed and assessed civil penalties from 1994 through 2003 and pipeline operators have paid them.<sup>4</sup> (FAA's general accounting division collects civil penalties for OPS.) We also analyzed data from OPS on its enforcement actions and from FAA on its collection of civil penalties. We examined OPS's procedures and actions to ensure that the safety violations that lead to civil penalties are remedied. We interviewed stakeholders on whether OPS's civil penalties help deter safety violations. As part of our review, we assessed the internal controls and the reliability of the data elements needed for this engagement. We determined that the data elements were sufficiently reliable for our purposes, except for those that would allow us

---

<sup>4</sup>Before OPS imposes a civil penalty, it issues a notice of probable violation to the pipeline operator that documents the alleged violation and identifies the proposed civil penalty amount. OPS then allows the operator to present additional evidence. Unless the proposed violation and penalty are withdrawn after this step, OPS issues a final order that requires the operator to pay the penalty (termed "assessed penalties" in this report).

---

to determine the timeliness of civil penalty payments. This exception did not create a major impediment in reporting on OPS's use of civil penalties. We performed our review in accordance with generally accepted government auditing standards from June 2003 through July 2004. (See app. I for additional details on our scope and methodology.)

---

## Results in Brief

Although in recent years OPS has made a number of changes in its enforcement strategy that have the potential to improve pipeline safety, the effectiveness of this strategy cannot currently be determined because the agency has not incorporated three key elements of effective program management—clear program goals, a well-defined strategy for achieving those goals, and performance measures linked to the program goals. Without these three key elements, OPS cannot determine whether recent and planned changes in its enforcement strategy are having or will have the desired effects on pipeline safety. Under a more aggressive “tough but fair” enforcement strategy adopted in 2000, OPS has increased its use of civil penalties and other enforcement tools. However, OPS has not established goals that specify the intended results of this strategy, developed a policy that describes the strategy and its contribution to pipeline safety, or put measures in place that would allow OPS to determine and demonstrate the effects of this new strategy on pipeline safety. OPS officials told us that over the past several years they have placed priority on other areas—such as developing a new risk-based regulatory approach that is focused on ensuring that pipeline operators find and fix threats to pipeline safety in areas where an accident could have the most serious consequences—and that they believe these efforts will change the safety culture of the industry and have a greater impact on safety than enforcement. According to OPS officials, they have made significant progress in implementing this new approach and now intend to devote more attention to strengthening the management of the agency's enforcement program. OPS is working on developing an enforcement policy that will help define its enforcement strategy and has taken some initial steps toward identifying performance measures that could provide better information for managing enforcement efforts. However, the agency does not anticipate finalizing this policy until sometime in 2005. Additionally, OPS does not have a systematic approach in place that incorporates key practices for achieving successful performance measurement systems, such as linking performance measures to program goals.

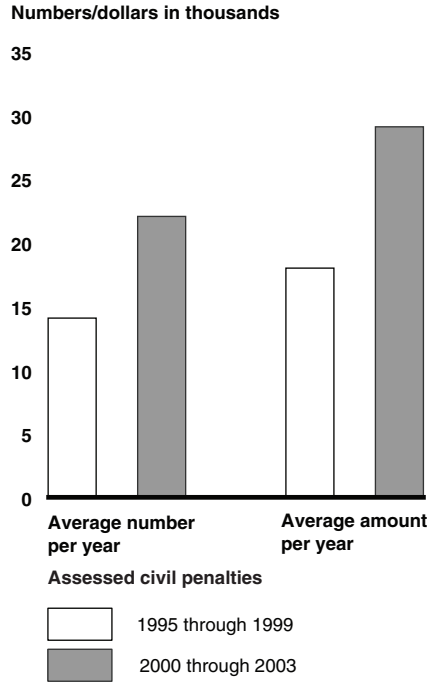
OPS increased both the number and the size of its civil penalties in response to criticism that its enforcement activities were weak and



---

ineffective. Specifically, in the last 4 years (2000 through 2003), after it decided to be “tough but fair” in assessing civil penalties, OPS assessed an average 22 penalties per year, compared with an average of 14 per year during the previous 5 years (1995 through 1999), when OPS’s policy was to “partner” with industry, rather than primarily to enforce compliance. In addition, the average civil penalty that OPS assessed from 2000 through 2003 was about \$29,000, compared with an average penalty of about \$18,000 during the previous 5 years. (See fig. 1.) OPS assessed the penalty that it proposed 69 percent of the time (150 of 216 civil penalties). For the remaining 66 penalties, OPS reduced the assessments by about 37 percent—from a total of about \$2.8 million to about \$1.7 million. OPS’s database does not provide summary information on why penalties are reduced. As a result, we are not able to provide information on the most common reasons why penalties were reduced. OPS does not use civil penalties as extensively as other enforcement actions; they represent about 14 percent of all the enforcement and administrative actions OPS has taken over the past 10 years.

**Figure 1: OPS's Use of Civil Penalties, 2000 through 2003 Compared with 1995 through 1999**



Source: GAO analysis of OPS and FAA data.

Note: This figure does not include the \$250,000 civil penalty OPS assessed Shell Pipeline Company for the June 1999 pipeline accident in Bellingham, Washington. See discussion later in this report.

While OPS has increased both the number and the size of its civil penalties, it is not clear whether this action will help deter noncompliance with the agency's safety regulations. The pipeline safety stakeholders we spoke with expressed differing views on this issue. Some—such as pipeline industry officials—said that civil penalties of any size act as a deterrent, in part because they keep companies in the public eye. Others—such as pipeline safety advocacy groups—said that OPS's civil penalties are too small to deter noncompliance. Finally, departmental data show that operators have paid 202 of the 216 civil penalties (94 percent) over the past 10 years. However, OPS and, to a lesser degree, FAA (whose general accounting division collects civil penalties for OPS) lack important management controls to ensure that penalties are collected. For example, although most civil penalties are paid, FAA is not aware of all the penalties that it may ultimately be responsible for collecting because OPS does not routinely

---

notify FAA of proposed or assessed civil penalties. We found that FAA had no record of 44 of the 290 civil penalties that OPS proposed from 1994 through 2003.

We are making several recommendations to improve OPS's ability to determine and demonstrate the effectiveness of its enforcement strategy and to make adjustments in this strategy as needed. We are also making recommendations to improve OPS's and FAA's management controls over the collection of civil penalties.

We provided a draft of this report to the Department of Transportation for its review and comment. Departmental representatives generally agreed with the information in the report and its recommendations.

---

## Background

Pipelines transport the bulk of natural gas and hazardous liquids in the United States. Specifically, pipelines carry nearly all of the natural gas and about two-thirds of the crude oil and refined oil products. Three primary types of pipelines form a 2.4-million-mile network across the United States.

- Natural gas transmission pipelines transport natural gas over long distances from sources to communities (about 327,000 miles, primarily interstate).
- Natural gas distribution pipelines continue to transport natural gas from transmission lines to consumers (about 1.9 million miles, primarily intrastate).
- Hazardous liquid pipelines transport products, such as crude oil, to refineries and the refined product on to product terminals (about 161,000 miles, primarily interstate).

Pipelines have an inherent safety advantage over other modes of freight transportation because they are primarily located underground, away from public contact. By one measure, the reduction in accidents overall, the hazardous liquid pipeline industry has greatly improved its safety record over the past 10 years. (See fig. 2.) From 1994 through 2003, accidents on interstate hazardous liquid pipelines decreased from 245 in 1994 to 126 in

---

2003, or almost 49 percent.<sup>5</sup> These accidents resulted in an average of 2 fatalities and 8 injuries per year. However, the industry's safety record has not improved for accidents with the greatest consequence—those resulting in a fatality, an injury, or in property damage of \$50,000 or more—called serious accidents in this report. The number of serious accidents stayed about the same over the 10-year period.<sup>6</sup> The lack of significant change over time in the number of serious accidents on interstate hazardous liquid pipelines may be due in part to the relatively small number of these accidents—about 88 every year. The accident rate—which considers the amount of product and the distance it is shipped—followed a similar pattern. The accident rate for hazardous liquid pipelines overall decreased from about 0.41 accidents per billion ton-miles shipped in 1994 to about 0.25 accidents per billion ton-miles shipped in 2002.<sup>7</sup> The accident rate for serious interstate hazardous liquid pipeline accidents stayed the same, averaging about 0.15 accidents per billion ton-miles shipped from 1994 through 2002.

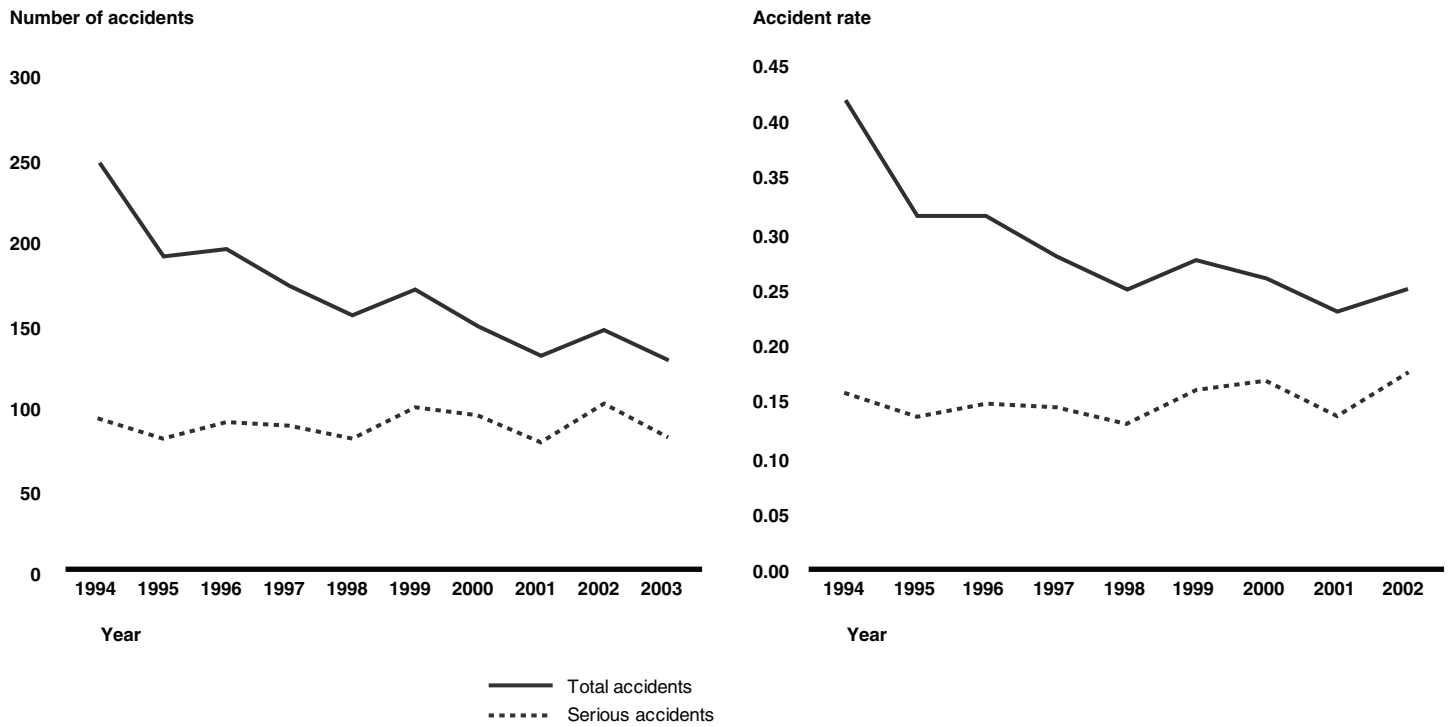
---

<sup>5</sup>Until February 2002, OPS required pipeline operators to report incidents with gross product losses of 50 barrels or more. In February 2002, OPS reduced the reporting threshold to 5 barrels. To maintain consistency over the 10-year period on which we are reporting, we use the 50-barrel threshold for product losses after February 2002.

<sup>6</sup>OPS requires that operators of hazardous liquid and natural gas pipelines report accidents involving deaths, injuries, or property damage of \$50,000 or more, among other things. We selected this indicator because these reporting requirements are common to both types of pipelines and because it reflects accidents with serious consequences.

<sup>7</sup>A ton-mile is 1 ton of a product shipped 1 mile. Aggregated industry data on the amounts of products shipped through hazardous liquid pipelines for 2003 are not available, so we do not present accident rate information for this year.

**Figure 2: Number of Accidents and Accident Rates for Interstate Hazardous Liquid Pipelines, 1994 through 2003**



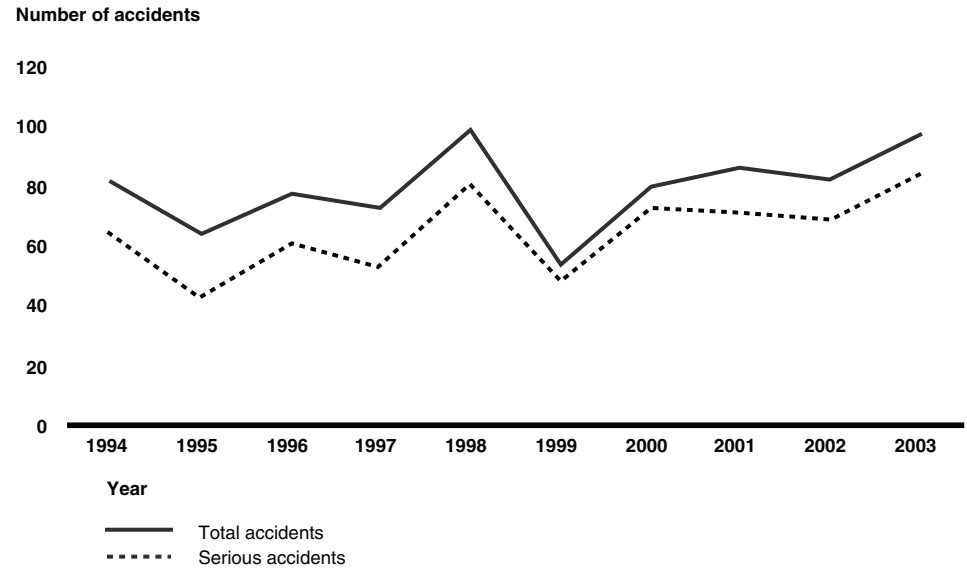
Source: GAO presentation of OPS and the Association of Oil Pipe Lines data.

Notes: The hazardous liquid accident rate is expressed in terms of accidents per billion ton-miles of petroleum products shipped. Federal agencies and industry associations we contacted could not provide data on other hazardous liquids shipped.

Aggregated industry data on the amounts of products shipped through hazardous liquid pipelines for 2003 are not available, so we do not present accident rate information for this year.

In contrast to hazardous liquid pipelines, accidents on interstate natural gas pipelines increased from 81 in 1994 to 97 in 2003, or almost 20 percent. (See fig. 3.) These accidents resulted in an average of 3 fatalities and 10 injuries per year. The number of serious accidents on interstate natural gas pipelines also increased, from 64 in 1994 to 84 in 2003, though they have fluctuated considerably over this period. Information on accident rates for natural gas pipelines is not available because of the lack of data on natural gas shipped through pipelines. As with hazardous liquid pipelines, the lack of significant change over time in the number of total accidents and serious accidents on interstate natural gas pipelines may be due in part to the relatively small number of these accidents—about 65 every year.

**Figure 3: Number of Accidents on Interstate Natural Gas Pipelines, 1994 through 2003**



Source: GAO presentation of OPS data.

Note: Data on natural gas shipped through interstate pipelines are not available; these data are needed to calculate the accident rate for this type of pipeline.

OPS, within RSPA, administers the national regulatory program to ensure the safe operation of the nation's natural gas and hazardous liquid pipelines. OPS has carried out its oversight responsibility by developing and issuing prescriptive minimum safety standards and enforcing these standards. Recently, the agency has developed additional standards that are risk based and focus on improving pipeline operators' management of their operations rather than on meeting prescriptive requirements. In 1999, to reduce the risk of accidents attributable to human error, OPS issued a new operator qualification regulation requiring pipeline operators to develop programs for ensuring that individuals working on their pipeline systems are qualified to do so. In 2000, to better focus on safety risks that are unique to individual pipelines, OPS issued the first in a series of integrity management regulations requiring operators to better protect pipeline segments where a leak or rupture could have a significant effect on densely populated or environmentally sensitive areas (called high-

---

consequence areas).<sup>8</sup> Under this new risk-based regulatory approach, operators must, in addition to meeting minimum safety requirements, develop comprehensive plans for identifying the range of risks facing these segments and taking actions to mitigate these risks. According to OPS, it is devoting a large portion of its resources to implementing the integrity management program. OPS issued integrity management requirements for large hazardous liquid pipeline operators (those with 500 or more miles of pipeline) in December 2000, for small hazardous liquid pipeline operators in January 2002, and for natural gas transmission pipeline operators in December 2003. The agency is carrying out inspections of operators' compliance with these requirements in separate phases, starting with inspections of large hazardous liquid operators from September 2002 through April 2004. In all, the agency will need to inspect the integrity management programs of more than 1,000 individual operators of hazardous liquid and natural gas transmission pipelines.

To improve pipeline safety, OPS carries out several types of activities. First, it develops and issues pipeline safety regulations and supports national consensus standards, which provide additional guidance to pipeline operators in managing their pipeline systems safely. In addition, OPS undertakes oversight activities, which include inspections to determine compliance with its regulations, accident investigations, and enforcement. Finally, OPS administers other programs—including, for example, research and development to enhance pipeline safety technologies, data collection to better define pipeline-related problems and concerns, and education to prevent excavation-related damage.

When OPS finds a violation—such as the failure of an operator to inspect various aspects of its pipeline—during an inspection or an investigation after an accident, it may take one of several types of enforcement or administrative actions depending on the nature and severity of the violation. (See table 1.) An enforcement action may require the operator to correct an unsafe condition or practice, or the enforcement action may be a civil penalty (monetary fine). An administrative action notifies a pipeline operator of a safety concern that is not serious enough to require an enforcement action.

---

<sup>8</sup>For a description of challenges OPS has faced in implementing its integrity management approach, see U.S. General Accounting Office, *Pipeline Safety and Security: Improved Workforce Planning and Communication Needed*, [GAO-02-785](#) (Washington, D.C.: Aug. 26, 2002).

---

---

**Table 1: OPS's Enforcement and Administrative Actions**

<b>Enforcement action</b>	<b>Description</b>
Corrective action order	Notifies an operator to remedy pipeline facility operations that OPS considers hazardous to life or property
Civil penalty	Imposes a monetary penalty on an operator that violates a safety rule
Compliance order	Notifies an operator of actions required to bring operations and facilities into compliance with safety rules
Notice of amendment	Tells an operator to amend existing procedures to correct deficiencies to ensure the safe operation of a pipeline facility
Safety order (under development)	Will order an operator to remedy safety-related conditions that could significantly change or restrict pipeline operations (these conditions do not pose a threat to life or property)
<b>Administrative action</b>	
Warning letter	Notifies an operator of probable violations of pipeline safety rules, but the probable violation does not cause an immediate hazard or irreparable damage to the facility
Letter of concern	Notifies an operator of a minor safety concern and of the action to be taken to address the problem

Source: GAO presentation of OPS information.

When imposing civil penalties, OPS must by law consider seven factors: (1) the nature, circumstances, and gravity of the violation; (2) the degree of the operator's culpability; (3) the operator's history of prior offenses; (4) the operator's ability to pay; (5) any good faith shown by the operator in attempting to achieve compliance; (6) the effect on the operator's ability to continue doing business; and (7) other matters as justice may require. Before OPS imposes a civil penalty, it issues the pipeline operator a notice of probable violation that documents the alleged violation and identifies the proposed civil penalty amount. OPS then allows the operator to present additional evidence either in writing or in an informal hearing. Attorneys from RSPA's Office of Chief Counsel preside over these hearings. Evidence presented by the operator may result in the civil penalty being affirmed, reduced, or withdrawn. If, after this step, the hearing officer determines that a violation occurred, OPS's associate administrator issues a final order that requires the operator to correct the safety violation (if needed) and pay



---

the penalty (termed “assessed penalties” in this report).<sup>9</sup> The operator has 20 days after the final order is received to pay the penalty. FAA collects civil penalties for OPS.<sup>10</sup>

From 1992 through 2002, federal law allowed OPS to assess up to \$25,000 for each day that a violation continued, not to exceed \$500,000 for any related series of violations. In December 2002, the Pipeline Safety Improvement Act increased these amounts to \$100,000 and \$1 million, respectively.

OPS is a small federal agency. In fiscal year 2003, OPS employed about 150 people—about half of whom were pipeline inspectors. In contrast, the Federal Railroad Administration, another agency within the Department of Transportation, employs 855 people, including more than 400 inspectors to enforce rail safety regulations. In addition, FAA, the agency within the Department of Transportation responsible for the safety of civil aviation, employed about 48,500 people in fiscal year 2003. About 4,000 of these employees were safety inspectors. For fiscal year 2003, OPS received about \$66.8 million in appropriations and about \$17.5 million from the Pipeline Safety Fund.

OPS retains full responsibility for enforcing regulations on interstate pipelines, and it certifies states to perform these functions for intrastate pipelines.<sup>11</sup> Currently, OPS has agreements with 11 states, known as interstate agents, to help it inspect segments of interstate pipeline within these states’ boundaries. However, OPS undertakes any enforcement actions identified through inspections conducted by interstate agents. In 2002, about 400 state pipeline safety inspectors assisted OPS in overseeing pipeline safety within their states, according to the latest available data.

---

<sup>9</sup>The operator may ask OPS to reconsider the assessed penalty amount. During this reconsideration, RSPA’s chief counsel reviews the record and OPS’s associate administrator renders a decision. Although OPS considers the evidence that operators provide to have their penalties reduced or withdrawn, OPS says it does not negotiate penalty amounts with pipeline operators.

<sup>10</sup>To consolidate its accounting functions, RSPA began contracting with FAA’s general accounting division in September 1993 to collect its accounts receivable, including civil penalties for OPS.

<sup>11</sup>In 2003, 49 state agencies, the District of Columbia, and Puerto Rico were certified for inspecting and enforcing regulations on intrastate pipelines.

---

---

## Key Management Elements Are Needed to Determine the Effectiveness of OPS's Enforcement Strategy

Although in recent years OPS has made a number of changes in its enforcement strategy that have the potential to improve pipeline safety, the effectiveness of this strategy cannot currently be determined because the agency has not incorporated three key elements of effective program management—clear program goals, a well-defined strategy for achieving those goals, and performance measures linked to the program goals.

---

## OPS's Enforcement Strategy, as Well as a Broader Oversight Approach, Has Been Evolving

OPS's enforcement strategy, as well as its overall approach for overseeing pipeline safety, has undergone significant changes in the last 5 years. Before 2000, the agency had emphasized partnering with the pipeline industry to improve pipeline safety rather than punishing noncompliance. In 2000, in response to concerns that its enforcement was weak and ineffective, the agency decided to institute a "tough but fair" enforcement approach and committed to making greater use of all its enforcement tools, including larger civil penalties. In 2001, to further strengthen its enforcement, the agency began issuing more corrective action orders requiring operators to address safety problems that led to pipeline accidents. In 2002, OPS created an Enforcement Office to put more focus on enforcement and help ensure consistency in enforcement decisions. However, the agency has not yet filled key positions in this office.

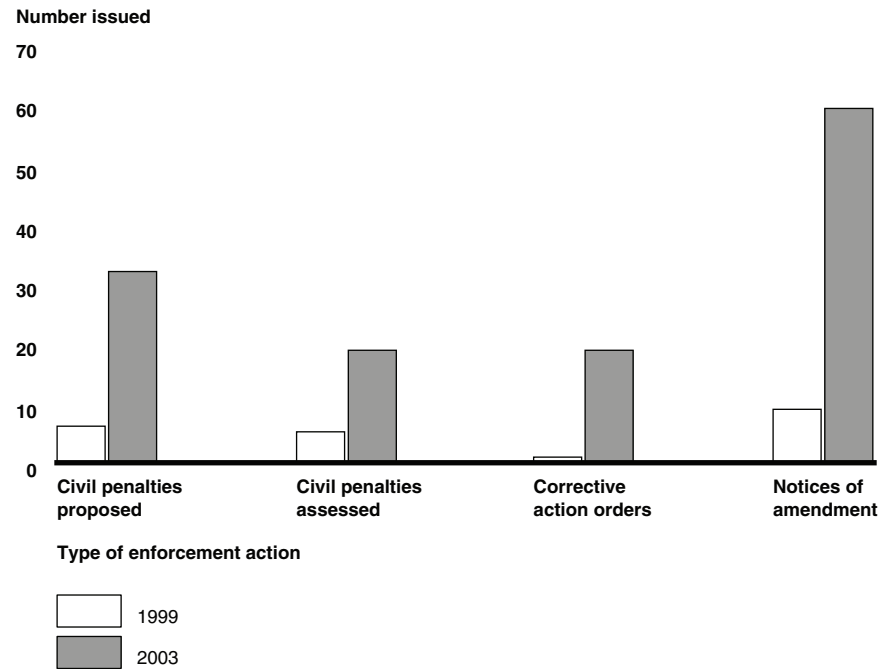
OPS was making these changes in its enforcement strategy at the same time that it was significantly changing its overall approach for overseeing pipeline safety. In particular, in 2000 the agency began implementing its new integrity management program, which requires operators to systematically manage risks to their pipelines in areas where an accident could have the highest consequences. The agency believes that pipeline accidents in these high-consequence areas will decrease because operators are required, under this risk-based approach, to identify and repair significant defects in pipelines located in these areas. Officials have emphasized that they believe this program is improving the safety culture of the pipeline industry and has a greater potential to improve safety than enforcing OPS's traditional minimum safety standards. According to these officials, in the last several years, they have placed a priority on developing and implementing this risk-based regulatory approach and on developing a sound approach for overseeing pipeline operators' fulfillment of the agency's new requirements. For example, OPS has developed detailed protocols and guidance for inspecting operators' identification of risks and resulting repairs and has developed new information systems for tracking

---

the status of issues identified in these inspections. OPS has developed a similar approach for overseeing these companies' fulfillment of its new requirements for ensuring that their employees are qualified to operate pipeline systems. According to OPS officials, the agency plans to use these new oversight approaches as a model for improving its oversight of operators' compliance with its minimum safety requirements. Officials have emphasized that their efforts to raise safety standards, inspect pipeline operators against these standards, investigate accidents, and take enforcement actions collectively represent an overall systematic approach to improving pipeline safety.

In 2002, OPS began to enforce its new integrity management and operator qualification standards, in addition to its minimum safety standards. For integrity management, the agency has primarily used notices of amendment, which require improvements in procedures rather than stronger enforcement actions to give pipeline operators time to learn how to build programs that meet OPS's complex standards. OPS has recently started to make greater use of civil penalties in enforcing these standards. The agency has also used a mix of enforcement actions in enforcing its operator qualification standards. OPS's use of civil penalties, corrective action orders, and notices of amendment was significantly greater in 2003 than it was in 1999, the year before OPS started changing its enforcement strategy. (See fig. 4.)

**Figure 4: OPS’s Use of Selected Enforcement Actions in 1999 and 2003**



Source: GAO analysis of OPS and FAA data.

According to OPS’s associate administrator, the agency has made significant progress in implementing its integrity management program and now needs to devote more attention to strengthening the management of its enforcement program.<sup>12</sup> Consequently, OPS has recently begun to “reengineer” this program. Efforts under way include developing a new enforcement policy and guidelines, developing a streamlined process for handling enforcement cases, modernizing and integrating the agency’s inspection and enforcement databases, meeting with stakeholders to obtain their views on how to make the enforcement action fit the violation, and hiring additional staff devoted to enforcement. Some aspects of these plans are discussed in more detail in the following sections.

<sup>12</sup>According to the associate administrator of OPS, recent interactions with the Senate Committee on Commerce, Science and Transportation resulting from a July 2003 pipeline rupture in Arizona and with us during our review have reinforced the need to devote more management attention to strengthening enforcement.

---

---

## OPS Needs Goals for Its Enforcement Program

Although OPS has overall performance goals, the agency has not established specific goals for its enforcement program. According to OPS officials, the agency's enforcement program is designed to achieve OPS's overall performance goals of (1) reducing the number of pipeline accidents by 5 percent annually and (2) reducing the number of spills of oil and other hazardous liquids from pipelines by 6 percent annually.<sup>13</sup> A number of other agency efforts—including the development of new safety standards, inspections, and initiatives to help communities prevent damage to pipelines—are also designed to achieve these goals.

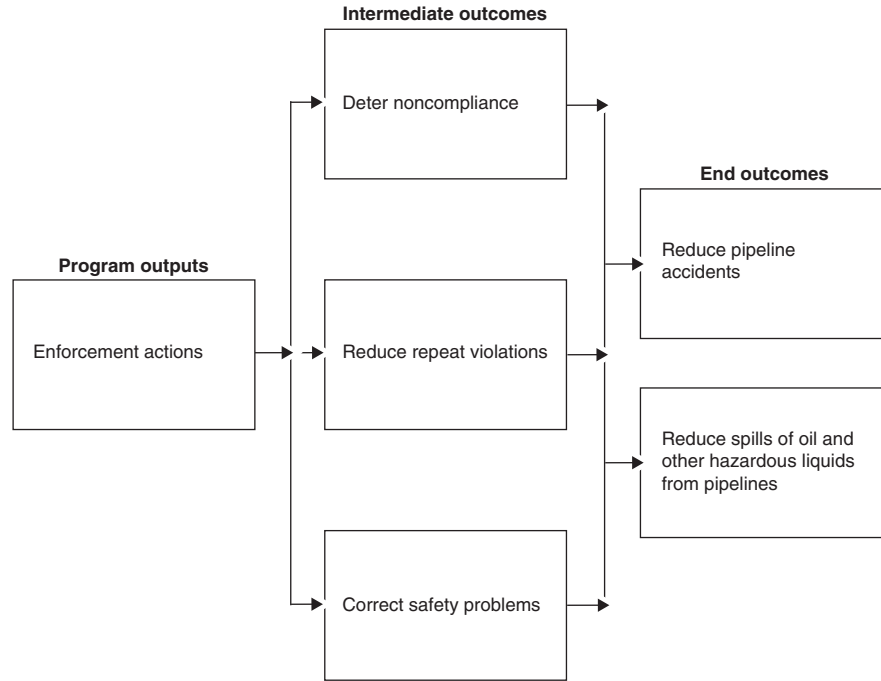
The above performance goals are useful agencywide safety goals because they identify the end outcomes, or ultimate results, that OPS seeks to achieve through its various efforts. However, OPS has not established goals for its enforcement program that identify the intermediate outcomes, or direct results, the enforcement program seeks to achieve. Intermediate outcomes show progress toward achieving end outcomes. For example, enforcement actions can result in improvements in pipeline operators' safety performance that can subsequently result in reduced pipeline accidents and spills. OPS managers have told us that the desired direct results of enforcement actions are deterring noncompliance with safety standards, reducing repeat violations of specific standards, and influencing pipeline operators' safety performance by requiring safety improvements to correct identified problems. Program outputs, such as enforcement actions, can lead to such intermediate outcomes, which in turn can result in the desired end outcomes of reduced accidents and spills.<sup>14</sup> (See fig. 5.)

---

<sup>13</sup>OPS refers to the release of natural gas from a pipeline as an "incident" and a spill from a hazardous liquid pipeline as an "accident." For simplicity, this report refers to both as "accidents."

<sup>14</sup>We have suggested that regulatory programs develop logic models to develop a better understanding of how their programs deliver results in order to select appropriate goals. Developing such a model involves describing how a program's activities produce outputs and how these outputs are connected to intermediate and end outcomes. See U.S. General Accounting Office, *Managing for Results: Strengthening Regulatory Agencies' Performance Management Practices*, GAO/GGD-00-10 (Washington, D.C.: Oct. 28, 1999).

**Figure 5: Example of How OPS's Enforcement Strategy Contributes to Pipeline Safety**



Source: GAO.

Note: The intermediate outcomes identified in this figure are examples of the intended direct results of OPS's enforcement strategy and are based on comments by OPS officials in various interviews. OPS has not identified these as intermediate outcomes or goals of its enforcement program.

We have reported that it is a useful practice for federal programs to complement end outcome goals with intermediate outcome goals in order to help show a program's contribution to desired end outcomes.<sup>15</sup> OPS is considering establishing a goal to reduce the amount of time it takes to issue final enforcement actions. While such a goal could be useful for improving the management of the enforcement program, it does not reflect the direct results the agency hopes to achieve through enforcement. Clear goals for the enforcement program that specify intended intermediate

<sup>15</sup>See [GAO/GGD-00-10; Agency Performance Plans: Examples of Practices That Can Improve Usefulness to Decisionmakers](#), [GAO/GGD/AIMD-99-69](#) (Washington, D.C.: Feb. 26, 1999); and *Managing for Results: Measuring Program Results That Are Under Limited Federal Control*, [GAO/GGD-99-16](#) (Washington, D.C.: Dec. 11, 1998).

---

outcomes (such as a reduced number of repeat offenders) would be useful to OPS and to external stakeholders to show how enforcement efforts contribute to pipeline safety.

---

## OPS Needs to Fully Define Its Enforcement Strategy

OPS has not fully defined its strategy for using enforcement to achieve its goals. According to OPS officials, the agency's increased use of civil penalties and corrective action orders reflects a major change in its enforcement strategy. However, although OPS began to implement these changes in 2000, it has not yet developed a policy that describes this new, more aggressive, enforcement strategy or how the strategy will contribute to the achievement of OPS's performance goals. In addition, although OPS's authorizing statutes and regulations provide general guidance on the use of various types of enforcement actions, the agency does not have up-to-date detailed internal guidelines on the use of its enforcement actions that reflect its current strategy. For example, OPS has an enforcement manual that provides general guidance on the various types of enforcement actions and how each should be used, but this guidance reflects the agency's earlier, more lenient, approach to enforcement and does not specify the types of situations that may warrant certain types of actions. In addition, although OPS began enforcing its integrity management standards and received greater enforcement authority under the Pipeline Safety Improvement Act in 2002, it does not yet have guidelines in place for enforcing these standards or implementing the new authority provided by the act.<sup>16</sup>

An important internal control practice is to have policies and procedures for each agency activity.<sup>17</sup> According to agency officials, OPS management has communicated enforcement priorities and ensured consistency in enforcement decisions through frequent internal meetings and detailed inspection protocols and guidance. However, without enforcement policies and guidelines in place that reflect its current strategy, the agency lacks reasonable assurance that this strategy is being carried out effectively. For example, OPS regional and state inspector staff may not be fully aware of

---

<sup>16</sup>We have reported on challenges that OPS faces in enforcing its complex integrity management program consistently and effectively. See [GAO-02-785](#).

<sup>17</sup>U.S. General Accounting Office, *Internal Control Standards: Internal Control Management and Evaluation Tool*, [GAO-01-1008G](#) (Washington, D.C.: August 2001).

---

the agency's current strategy, and regional directors may be less likely to make complex judgments about enforcement in a uniform manner.

Agency officials recognize the need to develop an enforcement policy and up-to-date detailed enforcement guidelines and have been working on various aspects of this task. According to OPS officials, the agency has been in a period of "recreating" its enforcement policy. To date, the agency has completed an initial set of enforcement guidelines for its operator qualification standards and has developed various other draft guidelines. According to OPS officials, the policy and remaining guidelines, when completed, will

- reflect the agency's increased emphasis on civil penalties and corrective action orders and provide detailed guidance on the use of these and other enforcement tools;
- cover the enforcement of OPS's traditional safety standards, as well as its new integrity management standards; and
- discuss how OPS will implement the greater enforcement authority provided to it by the Pipeline Safety Improvement Act of 2002.

Agency officials anticipate that the new enforcement policy and remaining guidelines will not be finalized until sometime in 2005 because of the complexity of these tasks.

While the development of an enforcement policy and guidelines should help to define OPS's enforcement strategy, it is not clear whether this effort will link this strategy with results, since agency officials have not established goals specifically for their enforcement efforts. We have reported on the importance for effective program management of connecting strategies to desired results by clearly defining program strategies and developing and presenting a rationale for how these strategies contribute to the achievement of goals.<sup>18</sup>

---

<sup>18</sup>See our previously cited reports, [GAO/GGD-00-10](#) and [GAO/GGD/AIMD-99-69](#), and *The Results Act: An Evaluator's Guide to Assessing Agency Annual Performance Plans*, [GAO/GGD-10.1.20](#) (Washington, D.C.: April 1998).



---

---

## OPS Needs Adequate Measures of the Effectiveness of Its Enforcement Strategy

According to OPS officials, the agency uses three types of performance measures to determine the effectiveness of both its enforcement activities and other oversight efforts: (1) the achievement of agency performance goals, (2) agency inspection and enforcement activity, and (3) the integrity management performance of pipeline operators, such as pipeline repairs made in response to the agency's new requirements.<sup>19</sup> (See table 2.) These measures provide useful information about the agency's efforts to improve pipeline safety. For example, measures of pipeline repairs made in response to the agency's integrity management requirements provide information on the intermediate outcomes, or the direct results, of this new regulatory approach and help demonstrate how this approach leads to reductions in pipeline accidents and spills. However, OPS's current measures do not clearly indicate the effectiveness of its enforcement strategy because they do not measure the intermediate outcomes of enforcement actions that can contribute to pipeline safety, such as improved compliance, fewer repeat violations of specific standards, or the implementation of safety improvements required to correct identified problems.

---

<sup>19</sup>See appendix IV for trends in pipeline accidents, inspections conducted, and enforcement actions taken.

**Table 2: Enforcement Program Performance Measures that OPS Currently Uses and Is Considering Developing**

Type of measure	Description
<b>Measures OPS currently uses</b>	
Achievement of agency performance goals	Annual numbers of natural gas and hazardous liquid pipeline accidents and tons of hazardous liquid materials spilled per million ton-miles shipped
Inspection and enforcement activity	Number of inspections completed; hours per inspection; accident investigations; enforcement actions taken, by type; and average proposed civil penalty amounts
Integrity management performance	Annual numbers of accidents in areas covered by integrity management standards and of certain actions by pipeline operators in response to these standards, such as pipeline repairs completed and miles of pipeline assessed <sup>a</sup>
<b>Measures OPS is considering developing</b>	
Management of enforcement actions	The time taken to issue final enforcement actions, the extent to which penalty amounts are reduced, and the extent to which operators commit repeat violations
Safety improvements ordered by OPS	Actions by pipeline operators in response to corrective action orders, including miles of pipeline assessed, defects discovered, repairs made, and selected costs incurred
Results of integrity management and operator qualification inspections	The percentage of pipeline operators that did not meet certain requirements and the reduction in the number of operators with a particular deficiency

Source: GAO analysis of OPS information.

<sup>a</sup>OPS started collecting some of these data in 2002 but does not anticipate obtaining all of the information annually until 2005.

As part of efforts to improve its information systems, OPS is considering developing the following additional types of measures of the effectiveness of its enforcement and other oversight activities (see table 2):

- *Measures related to the management of enforcement actions.* OPS is developing these new measures as part of efforts to integrate and modernize its inspection and enforcement databases and improve its handling of enforcement cases.
- *Measures of safety improvements that were ordered by OPS.* The agency has recently started to collect new data on actions by pipeline operators in response to corrective action orders and may also collect such data for safety orders in 2005, when it plans to start using these types of orders.

- 
- *The results of OPS's inspections of operator integrity management and operator qualification programs.* OPS has developed new databases that track the safety issues identified in integrity management and operator qualification inspections, as well as enforcement actions. In subsequent inspections, inspectors will follow up on these issues and record their status.

Some of the measures under consideration could provide more information on the intermediate outcomes of the agency's enforcement strategy, such as the extent of repeat violations and repairs made in response to corrective action orders, as well as other aspects of program performance, such as the timeliness of enforcement actions. In addition, measures of the results of integrity management and operator qualification inspections could provide further information on the intermediate outcomes of these new regulatory approaches.

We have found that agencies that are successful in measuring performance strive to establish measures that demonstrate results, address important aspects of program performance, and provide useful information for decision making.<sup>20</sup> While OPS's efforts to develop new measures have the potential to eventually produce better information on the performance of its enforcement program than is currently available, the agency has not fully adopted key practices for achieving these characteristics of successful performance measurement systems. The following sections discuss these characteristics and the extent to which OPS has fulfilled them in developing measures of enforcement performance.

## Measures Should Demonstrate Results

Measures should be tied to program goals and demonstrate the degree to which the desired program results are achieved. These program goals should in turn be linked to overall agency goals. The new measures that OPS is considering are not based on such linkages, because the agency has not established goals for its enforcement program. Leading organizations seek to establish clear hierarchies of performance goals and measures that link the goals and measures for each organizational level to each successive level. Without such clear hierarchies, an agency will lack a

---

<sup>20</sup>See, for example, [GAO/GGD/AIMD-99-69](#) and *Executive Guide: Effectively Implementing the Government Performance and Results Act*, [GAO/GGD-96-118](#) (Washington, D.C.: June 1996). We have also identified specific attributes of successful performance measures linked to these characteristics. See *Tax Administration: IRS Needs to Further Refine Its Tax Filing Season Performance Measures*, [GAO-03-143](#) (Washington, D.C.: Nov. 22, 2002).

---

straightforward road map showing how daily activities contribute to attaining agencywide goals. Although OPS is considering some new measures that could provide more information on the intermediate outcomes of its enforcement strategy, without first setting clear goals that identify the various direct results the agency seeks to achieve through enforcement, it may not choose the most appropriate measures of results and may not follow through in developing such measures. For example, although OPS adopted a more aggressive enforcement strategy starting in 2000, without appropriate goals and measures the agency cannot determine the effects of this new strategy on operators' compliance with its safety standards. OPS officials acknowledge that it is important to develop such intermediate goals and related measures but emphasize that it is challenging to do so because of the diversity of pipeline operations and the complexity of OPS's regulations.<sup>21</sup>

Measures of program results can help hold agencies accountable for the performance of their programs. Congress needs information on program results to support its oversight of agencies and their budgets. Stakeholders can use this information to accurately judge program effectiveness. We asked a variety of pipeline safety stakeholders—including representatives of industry; federal, state, and local agencies; and advocacy groups—for their views on the effectiveness of OPS's enforcement efforts. While many of them stated that they believe OPS's enforcement program has improved in recent years, many also stated that they could not comment on the impact of the agency's enforcement actions on pipeline safety. Some noted that this effectiveness is difficult to judge because of a lack of data.

---

## Measures Should Address Important Aspects of Program Performance

For each goal, programs should select a few measures that cover key performance dimensions and take different priorities into account. While the new measures that OPS is considering cover a wider range of performance aspects than do its current measures, the agency may not be able to make sound decisions about which measures are the most important without first setting goals for its enforcement program. An agency official told us that a key factor in choosing final measures would be the availability of supporting data. However, the most essential

---

<sup>21</sup>We have reported on the challenges faced by agencies in developing measures of program results and how they have overcome such challenges. See, in particular, [GAO/GGD-00-10](#), [GAO/GGD-99-16](#), and *Managing for Results: Regulatory Agencies Identified Significant Barriers to Focusing on Results*, [GAO/GGD-97-83](#) (Washington, D.C.: June 24, 1997).

---

measures, such as measures showing the enforcement program's progress in achieving compliance, may require the development of new data.

Developing appropriate performance measures requires carefully coordinated planning, including a systematic approach for identifying and refining potential measures that address various important aspects of program performance.<sup>22</sup> OPS has not comprehensively examined its needs for measuring enforcement results as well as the results of other oversight efforts to ensure that its choice of measures will take into account and balance its various priorities. For example, OPS has developed databases that will track the status of safety issues identified in integrity management and operator qualification inspections, but has not yet developed the capability to centrally track the status of safety issues identified in determining compliance with its minimum safety standards. The results of follow-up by inspectors on the status of these issues are maintained at the regional office level but are not recorded in the agency's inspection or enforcement databases. Agency officials have told us that they are considering how to add this capability as part of an effort to modernize and integrate these databases and that the integrity management and operator qualification databases will serve as a model for this effort. However, the agency has not yet put in place a systematic integrated approach for designing measures of oversight performance, including enforcement performance.

### Measures Should Provide Useful Information for Decision Making

Performance measures should provide agency managers with timely, action-oriented information in a format that helps them make decisions that improve program performance, including decisions to adjust policies and priorities.<sup>23</sup> OPS uses its current measures of enforcement performance in a number of ways to oversee pipeline safety, including monitoring pipeline operators' safety performance and planning inspections. While these uses are important, they are only indirectly related to the management of enforcement results. Agency officials have made progress in this area by identifying possible new measures of enforcement

---

<sup>22</sup>See, for example, [GAO/GGD-00-10](#); Harry Hatry, *Performance Measurement: Getting Results* (Washington, D.C.: Urban Institute, 1999); and National Academy of Public Administration, *Designing Effective Performance Measures—Focus Paper* (Washington, D.C.: 1999).

<sup>23</sup>See, for example, [GAO/GGD-96-118](#) and U.S. General Accounting Office, *Results-Oriented Government: GPRA Has Established a Solid Foundation for Achieving Greater Results*, [GAO-04-38](#) (Washington, D.C.: Mar. 10, 2004).

---

results and other aspects of program performance, such as measures of the timeliness of enforcement actions that may prove more useful for managing the enforcement program.

Not having adequate measures limits OPS's ability to make informed decisions about its enforcement strategy. Although OPS has made major changes in its enforcement strategy in the last several years, it has decided on these changes with little information on the effectiveness of its prior strategy. Agency officials explained that they decided to increase the use of civil penalties and corrective action orders to improve public confidence in the agency's ability to enforce its standards, following the major pipeline incidents in Bellingham, Washington, and Carlsbad, New Mexico, in 1999 and 2000, respectively. They also noted that their decisions about enforcement policy are part of their overall approach for overseeing and improving pipeline safety and are not based on trends in performance measures.

---

## OPS Has Increased Its Use of Civil Penalties; OPS and FAA Need Stronger Management Controls Over Collections

In response to criticism that its enforcement activities were weak and ineffective, OPS increased both the number and the size of the civil monetary penalties it assessed beginning in 2000. Pipeline safety stakeholders we spoke with expressed differing views on whether OPS's civil penalties are effective in deterring noncompliance with pipeline safety regulations. Most of the penalties that OPS assessed have been paid; however, OPS and FAA lack important management controls to ensure that penalties are collected.

The civil penalty results we present are mostly for OPS's enforcement of its minimum safety standards because OPS did not begin to enforce its integrity management standards until 2002.

---

## OPS Has Recently Proposed and Assessed More and Larger Civil Penalties

OPS proposed and assessed more civil penalties during the past 4 years—under its current “tough but fair” enforcement approach—than it did in the previous 5 years, when it took a more lenient “partnering” enforcement approach. (See table 3. Also, see the previous section and app. II for a discussion of changes in OPS's enforcement approaches.) From 2000 through 2003, OPS proposed 127 civil penalties (about 32 per year on average) compared with 94 civil penalties (about 19 per year on average) from 1995 through 1999. Furthermore, of these proposed civil penalties, 88 were assessed from 2000 through 2003 (22 per year on average), whereas

70 were assessed from 1995 through 1999 (about 14 per year on average). During the first 5 months of 2004, OPS proposed 38 civil penalties. While the recent increase in the number and the size of OPS's civil penalties occurred under the agency's new "tough but fair" enforcement approach, other factors, such as more severe violations, may be contributing factors as well.

**Table 3: OPS's Proposed and Assessed Civil Penalties, 1994 through 2003**

Dollars in thousands

Year	Number of proposed civil penalties	Total proposed civil penalty amounts	Average proposed penalty amount	Number of assessed civil penalties	Total assessed civil penalty amounts	Average assessed penalty amount
1994	69	\$1,145	\$17	58	\$735	\$13
1995	33	734	22	28	531	19
1996	34	532	16	21	227	11
1997	13	355	27	10	321	32
1998	8	94	12	6	78	13
1999	6	110	18	5	100	20
2000	21	1,294 <sup>a</sup>	62	17	481 <sup>a</sup>	28
2001	27	1,690 <sup>b</sup>	63	22	1,133	52
2002	47	1,729	37	30	585	20
2003	32	1,010	32	19	359	19
<b>Total<sup>c</sup></b>	<b>290</b>	<b>\$8,692</b>	<b>\$30</b>	<b>216</b>	<b>\$4,549</b>	<b>\$21</b>

Source: GAO analysis of OPS and FAA data.

Note: Proposed penalty amounts ranged from \$500 to \$674,000 and assessed penalty amounts ranged from \$500 to \$400,000.

The data in this table may not be comparable to data that OPS reports. See the following text for a discussion.

<sup>a</sup>Excludes the penalty of \$3.05 million that OPS proposed to Olympic Pipeline Company and the penalty of \$250,000 OPS assessed to Shell Pipeline Company for the Bellingham accident. Including this extraordinarily large and unusual proposed penalty would skew the overall results by making the average penalty larger than it actually is. As noted above, no other proposed penalty amount exceeded \$674,000.

<sup>b</sup>Excludes the penalty of \$2.5 million that OPS proposed to El Paso Gas Company for the Carlsbad accident. We excluded this proposed penalty for the same reason that we excluded the proposed penalty for the Bellingham accident discussed in the preceding note.

<sup>c</sup>Totals may not add because of rounding.

Overall, OPS does not use civil penalties extensively. Civil penalties represent about 14 percent (216 out of 1,530) of all enforcement actions taken over the past 10 years. OPS makes more extensive use of other types

---

of enforcement actions that require that operators act to correct safety violations. In contrast, civil penalties do not require a safety improvement, but represent a monetary sanction for violating safety regulations. Finally, OPS expects to make greater use of civil penalties for violations identified during integrity management inspections as it gains more experience with implementing this safety approach.

The sizes of the civil penalties have increased. From 1995 through 1999, the average proposed civil penalty was about \$19,000. From 2000 through 2003, the average proposed civil penalty increased by over 132 percent to about \$45,000. Similarly, although to a lesser degree, assessed penalties increased. From 1995 through 1999, the average assessed civil penalty was about \$18,000. From 2000 through 2003, the average assessed civil penalty increased by 62 percent to about \$29,000.<sup>24</sup> (All amounts are in current year dollars. Inflation was low during this period. If the effects of inflation are considered, the average assessed penalty for 1995 through 1999 would be \$21,000, and the average assessed penalty for 2000 through 2003 would be \$30,000, in 2003 dollars.)

We excluded two proposed penalties totaling over \$5 million resulting from the Bellingham and Carlsbad incidents from our analysis because both were extraordinarily large (no other proposed penalty exceeded \$674,000), and OPS, as of mid-July, had not assessed a penalty for the Carlsbad incident. (RSPA referred the penalty to the Department of Justice for judicial action.) Including these proposed penalties would have skewed our results by making the average penalty appear larger than it actually is.<sup>25</sup>

For the 216 penalties that were assessed from 1994 through 2003, OPS assessed the penalty that it proposed 69 percent of the time (150 civil penalties). (See table 4.) For the remaining 66 penalties, OPS reduced the assessments by about 37 percent—from a total of about \$2.8 million to about \$1.7 million. However, the dollar difference between the proposed and the assessed penalties would be over three times as large had our analysis included the extraordinarily large penalty for the Bellingham, Washington, incident. For this case, OPS proposed a \$3.05 million penalty

---

<sup>24</sup>The median civil penalty was about \$5,800 for 1995 through 1999 and about \$12,700 for 2000 through 2003.

<sup>25</sup>If these amounts are included, the average proposed penalty amount for the 2000 through 2003 period was about \$87,600, a 350 percent increase over the 1995 through 1999 period.



and had assessed \$250,000 as of July 2004.<sup>26</sup> If we include this penalty in our analysis, then over this period OPS reduced total proposed penalties by about two-thirds, from a total of about \$5.8 million to about \$2 million.

**Table 4: Reductions in OPS’s Proposed Civil Penalties, 1994 through 2003**

Year	Number of assessed civil penalties	Number (percentage) of assessed civil penalties equal to proposed penalties	Number (percentage) of assessed civil penalties less than proposed penalties	Dollar (percentage) reduction from proposed penalties
1994	58	34 (59)	24 (41)	\$317,000 (49)
1995	28	16 (57)	12 (43)	77,100 (45)
1996	21	17 (81)	4 (19)	84,500 (48)
1997	10	8 (80)	2 (20)	6,000 (29)
1998	6	6 (100)	0 (0)	0 (0)
1999	5	5 (100)	0 (0)	0 (0)
2000	17	12 (71)	5 (29)	79,500 (18)
2001	22	9 (41)	13 (59)	377,400 (34)
2002	30	25 (83)	5 (17)	64,400 (34)
2003	19	18 (95)	1 (5)	5,000 (25)
<b>Total</b>	<b>216</b>	<b>150 (69)</b>	<b>66 (31)</b>	<b>\$1,010,900 (37)</b>

Source: GAO analysis of OPS and FAA data.

Note: This table differs from table 3 in that table 3 shows all proposed penalties, whether or not they resulted in a final assessment. Table 4 portrays only the results of penalties that resulted in a final assessment. As discussed in the text, this table does not include the proposed and assessed civil penalties that OPS issued to Olympic Pipeline. If it did, the difference in the amount proposed and assessed in 2000 would be \$2.8 million greater. Dollar amounts are rounded.

According to an OPS official, the agency reduces penalties, among other things, when the operator presents evidence that the inspector’s finding is weak or wrong or when the pipeline’s ownership changes during the period between the proposed and the assessed penalty. OPS’s database does not provide summary information on why penalties are reduced. It was not practical for us to gather information on a large number of penalties that were reduced because to do so would have required reviewing each penalty

<sup>26</sup>OPS proposed a \$3.05 million penalty against Equilon Pipeline Company, LLC (Olympic Pipeline Company) for the Bellingham incident and later assessed Shell Pipeline Company (formerly Equilon) \$250,000, which it collected. According to RSPA’s Office of Chief Counsel, the penalty against Olympic Pipeline Company is still open, waiting for Olympic Pipeline to emerge from bankruptcy court.

---

record and discussing each penalty with headquarters and regional officials. As a result, we are not able to provide information on the most common reasons why penalties were reduced. To provide examples of reasons why penalties were reduced, we reviewed several of these penalties. OPS reduced one of the penalties we reviewed because the operator provided evidence that OPS inspectors had miscounted the number of pipeline valves that OPS said the operator had not inspected. Thus, the violation was not as severe as OPS had stated, and OPS reduced the proposed penalty from \$177,000 to \$67,000. OPS reduced another proposed penalty from \$45,000 to \$27,000 because the operator took immediate action to correct the violation. As indicated earlier in this report, good faith efforts to achieve compliance by operators are one factor that OPS must, by law, consider in imposing civil penalties. Because we reviewed only a few instances in which penalties were reduced, we cannot say whether these examples are typical.

Our results may be different from the results that OPS reports because of the way the data are organized. OPS reports an action in the year in which it occurred. For example, OPS may propose a penalty in one year and assess it in another year (and possibly collect it in still another year). The data for this action would show up in multiple years. Thus, OPS's data represent the activity that took place in any one year, but this presentation does not allow users to determine the extent to which the proposed penalties resulted in assessed penalties or whether the proposed penalty amounts were reduced, since these actions may be contained in OPS reports for different years. To better track the disposition of civil penalties, we associated assessed penalties and penalty amounts with the year in which they were proposed—even if the assessment occurred in a later year.

---

### Stakeholders Expressed Differing Views on Whether OPS's Civil Penalties Deter Noncompliance

Although OPS has increased both the number and the size of the civil penalties it has imposed, the effect of this change, if any, on deterring noncompliance with safety regulations is not clear. The stakeholders we spoke with expressed differing views on whether OPS's civil penalties deter noncompliance.<sup>27</sup> The pipeline industry officials we contacted said that to a

---

<sup>27</sup>We spoke with representatives of four pipeline industry associations and three pipeline operators. We also spoke with all 11 interstate agents, two state associations of utility commissioners and pipeline safety representatives, one local agency representative of a city in Virginia, and two insurance companies. Finally, we spoke with representatives from four pipeline safety advocacy groups. See appendix I for a list of those we contacted.

---

certain extent OPS's civil penalties encourage pipeline operators to comply with pipeline safety regulations. One group of pipeline industry officials said that pipeline companies want to be on the record as being in compliance with pipeline safety regulations and therefore try to avoid any situation that would require OPS to issue an enforcement action. However, some industry officials said that OPS's enforcement actions are not the operators' primary motivation for safety. Instead, they said that the pipeline operators are motivated to operate safely because they need to avoid any type of accident, incident, or OPS enforcement action that impedes the flow of products through pipelines, hindering operators' abilities to provide good service to their customers. Pipeline industry officials also said that they want to operate safely and avoid pipeline accidents because such accidents negatively affect the public's perception of the company. In addition, other industry officials noted that OPS has other enforcement actions, such as corrective action orders, that give operators more incentive to operate safely because corrective action orders can cost companies much more money than civil penalties. For example, according to an OPS official, the corrective action order OPS imposed after the 1999 pipeline accident in Bellingham, Washington, cost Olympic Pipeline more than \$100 million. This sum includes about \$53 million to repair and replace needed infrastructure and an estimated \$50 million in lost revenue. Finally, the three pipeline operators with whom we spoke indicated that any enforcement action would deter noncompliance with pipeline safety regulations because of the resulting negative publicity and the potential for costly private litigation against the operator.

Most of the interstate agents and representatives of their associations, insurance company officials, and the local representative from one state expressed views similar to those of the pipeline industry officials. They said that, to a certain extent, they believe civil penalties deter operators' noncompliance with regulations. For example, some of the interstate agents said that civil penalties—no matter what the amount—are a deterrent because the penalty puts the pipeline operator in the public eye. However, a few disagreed with this point of view. For example, representatives of the state associations and the local representative from one state said that OPS's civil penalties are too small to be a deterrent and that other OPS actions and the costs resulting from accidents, including private litigation, are better deterrents. As discussed earlier, the average civil penalty that OPS assessed from 2000 through 2003 was about \$29,000.

Pipeline safety advocacy groups that we talked to also believed that the civil penalty amounts OPS imposes are too small to have any deterrent

---

effect on pipeline operators. However, a representative from one of the groups thought that the threat of additional civil penalties from OPS should influence a pipeline operator to comply with pipeline safety regulations in the future.

According to economic literature on deterrence, pipeline operators may be deterred if they expect a sanction, such as a civil penalty, to exceed any benefits of noncompliance.<sup>28</sup> Such benefits could, in some cases, be lower operating costs. The literature also recognizes that the negative consequences of noncompliance—such as those stemming from lawsuits, bad publicity, and the value of the products lost from accidents—can deter noncompliance along with regulatory agency oversight. Thus, for example, the expected costs of a legal settlement could overshadow the lower operating costs expected from noncompliance, and noncompliance might be deterred.

According to OPS, its policy since 1999 has been to make civil penalty information available to the public by publishing the final orders for all enforcement actions and to also publish all administrative actions on its Web site. We found that from 2000 through 2003 (the period OPS describes as its “tough but fair” enforcement era), OPS had posted 58 percent of final orders involving assessed civil penalties on its Web site. An agency official explained that OPS has not posted the remaining penalties because of high staff turnover. To the extent that publicizing noncompliance information on the Web site does deter noncompliance, OPS’s incomplete posting of assessed civil penalty information is not facilitating the achievement of this goal.

---

## Operators Paid Full Amounts of Most Civil Penalties

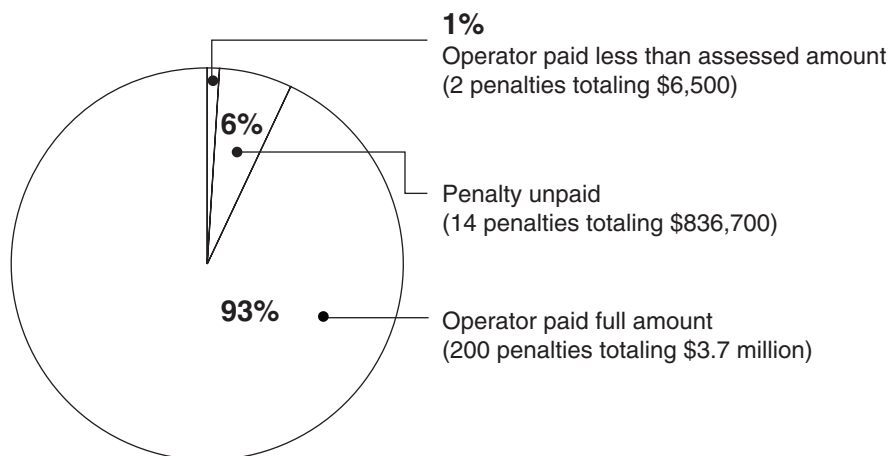
For the 216 penalties that OPS assessed from 1994 through 2003, pipeline operators paid the full amounts 93 percent of the time (200 instances) and reduced the amounts 1 percent of the time (2 instances). (See fig. 6.) Fourteen penalties (6 percent) remain unpaid, totaling about \$837,000 (about 18 percent of the penalty amounts). In some instances, pipeline operators pay their penalties based on the proposed—rather than assessed—amount. Our results do not include an analysis of the number of

---

<sup>28</sup>See, for example, A. Mitchell Polinsky and Steven Shavell, *The Economic Theory of Public Enforcement of Law*, *Journal of Economic Literature*, Vol. XXXVIII (March 2000). Expected sanctions are the product of the sanction amount and the likelihood of being detected and sanctioned by that amount.

penalties paid prior to assessment because FAA's and OPS's data lacked information necessary to complete the analysis.

**Figure 6: Operators' Payment of Civil Penalties, 1994 through 2003**



Source: GAO analysis of OPS and FAA data.

We followed up in one of the two instances in which the operator paid less than the assessed amount. In this instance, the operator requested that OPS reconsider the civil penalty, and OPS reduced the assessed penalty from \$5,000 to \$3,000 because the operator had a history of cooperation and OPS wanted to encourage future cooperation.

Neither FAA's nor OPS's data show why the 14 unpaid penalties have not been collected. To learn why, we spoke with both agencies about the status of these penalties and, based on the information provided, we determined that OPS closed 2 of the penalty cases without collecting the penalties, operators are appealing 5 penalties, OPS recently assessed 3 penalties, and OPS acknowledged that 4 penalties (totaling \$45,200) should have been collected. For some penalties, the information that FAA and OPS provided about the collection status conflicted. For example, FAA reported to us that 2 penalties had been paid recently, which was not reflected in the information reported to us by OPS. Regarding the 4 penalties that should have been collected, OPS files indicated that final assessments had been made, but because FAA records did not include final orders, FAA lacked the information it needed to take collection action. After we brought these

---

penalties to OPS's attention, OPS sent FAA the information it needed to pursue collection. As of June 2004, FAA had created accounts for these penalties and will begin sending balance due notices after the proper waiting period has expired.

We were not able to determine the extent to which operators' payments were timely (operators have 20 days to pay penalties) because we judged that the data elements in OPS's and FAA's databases were not reliable enough to do so. (See app. I.)

---

## OPS and FAA Need Better Management Controls to Ensure That Penalties Are Collected

Even though most civil penalties are paid, their payment is more likely due to operators' willingness to pay than to FAA's or OPS's actions. FAA is not aware of the full range of civil penalties that it may ultimately be responsible for collecting because OPS does not routinely notify FAA of proposed or assessed civil penalties. We found that for the period from 1994 through 2003, FAA had no record of 44 of the 290 civil penalties (totaling about \$500,000 in assessments) that OPS had proposed.<sup>29</sup> It is important for FAA to be aware of all proposed civil penalties because operators may choose to pay the proposed penalty rather than waiting for the final assessment. When FAA does not have a record of a civil penalty for which it receives a payment, it has to contact OPS for information about the penalty. In addition, if FAA does not know that OPS has assessed a civil penalty, it cannot act to collect the penalty if the operator does not pay on time.

Staff from OPS and RSPA's Office of Chief Counsel told us that they had not provided FAA with documentation of proposed or assessed penalties because each thought the other office was doing so. When we brought this apparent communication gap to OPS's attention, OPS agreed that it should provide FAA with civil penalty documentation so that FAA would be aware of the penalties that may be and are assessed. As of mid-July 2004, OPS had not begun to provide the documentation.

Although OPS is responsible for enforcing pipeline safety, it does not monitor the extent to which FAA collects civil penalties for pipeline safety violations. OPS does not request or receive regular updates from FAA

---

<sup>29</sup>We found these 44 penalties by comparing the information on proposed civil penalties from OPS's and FAA's databases. We identified 44 proposed penalties in OPS's data that did not appear in FAA's.

---

about the status of penalties or overall collections, although such reports are available. In addition, FAA does not routinely make available to OPS its reports on the status of civil penalties, although it does send them to RSPA's Office of Chief Counsel. We found that OPS was unaware that FAA prepares regular reports about penalties that are overdue or have been paid but not closed out. OPS does not evaluate the civil penalty data that it maintains in its enforcement database or review the data to ensure that its information about civil penalties is complete and up to date. OPS also does not compare its civil penalty data with FAA's data to identify missing or incomplete data. Finally, OPS does not evaluate its own enforcement database to identify overdue penalties and check with FAA on their status. After we brought these issues to OPS's attention, OPS officials told us that OPS is looking into setting up a system to monitor case activities and notify OPS and the deputy chief counsel when it is time to move a case to the next step.

---

## Conclusions

OPS has been focusing much of its effort on safety initiatives in areas other than the enforcement of minimum standards, such as its integrity management program and operator qualification standards, because the agency believes that these initiatives will result in major improvements in the overall safety of the pipeline industry. In light of the progress OPS has made in these other areas and the issues we raised with OPS in preparing this report, OPS has indicated that it will devote more attention to managing its enforcement program than it has previously. However, because OPS cannot measure the effects of changes in its enforcement strategy on operators' performance, it will not know whether any management changes it makes lead to improvements in the industry's compliance. Without goals for its enforcement program, a well-defined strategy for achieving these goals, and performance measures linked to program goals, OPS cannot demonstrate how its enforcement efforts contribute to pipeline safety or learn from changes in its enforcement policy.

Although operators pay the vast majority of the civil penalties that OPS proposes or assesses, their compliance is more likely due to their willingness to pay than to OPS's or FAA's efforts because neither agency has been providing the other with the information needed to ensure effective penalty collections. If FAA does not know that OPS has imposed civil penalties, it cannot take actions to collect them, and if FAA does not communicate the status of its collections to OPS, OPS misses opportunities to understand the effects of its enforcement actions on operators' behavior.

---

Finally, OPS's incomplete implementation of its policy to post its civil penalty actions on its Web site limits the public's ability to understand the enforcement actions that OPS has taken.

---

## Recommendations for Executive Action

We are making a total of six recommendations; three to improve OPS's enforcement strategy and three to improve management controls over the collection of civil penalties.

To improve OPS's ability to determine the effectiveness of its enforcement strategy and make adjustments to this strategy as needed, we are recommending that the Secretary of Transportation direct the Associate Administrator for Office of Pipeline Safety to take the following three actions:

- OPS should establish goals for its enforcement program.
- OPS should fully define its strategy for achieving these goals.
- OPS should establish a systematic approach for designing performance measures that incorporates identified key practices.

We also recommend that the Secretary of Transportation direct the Associate Administrator, OPS, and the Administrator, FAA, as appropriate, to take the following three actions to improve management controls over the collection of civil penalties and the public dissemination of information on enforcement actions:

- OPS should inform FAA of all proposed and assessed civil penalties so that FAA can carry out its collection functions.
- FAA should share its reports on collections with OPS so that OPS will know the status of civil penalty enforcement actions.
- OPS should post all enforcement actions on its Web site, consistent with its policy.

---

## Agency Comments and Our Evaluation

In commenting on a draft of this report, the Associate Administrator for Pipeline Safety in RSPA and other officials told us that OPS welcomed the insights provided by the report and generally concurred with the report and



---

its recommendations. The associate administrator emphasized that OPS enforcement has improved since 1999 through use of its full range of enforcement tools, including civil penalties to punish violators, corrective action orders to address immediate and potential safety concerns, and notices of amendment to require and monitor changes to safety programs. OPS told us that it continues to seek constructive interactions with the industry through the integrity management program; however, companies breaking the law must expect to be punished, and OPS will use all of its enforcement authority to achieve 100 percent safety compliance.

Regarding the effectiveness of OPS's enforcement strategy, OPS told us that, to help attain its primary performance goals (reducing the number of accidents by 5 percent annually and reducing the number of pipeline spills by 6 percent annually), it will establish intermediate outcomes as discussed in the report to help improve its ability to evaluate the effectiveness of specific enforcement tools. The officials also indicated that OPS expects to learn more about enforcement effectiveness through its two statutorily mandated technical advisory committees, which are reviewing, among other things, proposed modifications and improvements to the enforcement program. These committees were established pursuant to the Natural Gas Pipeline Safety Act of 1968 and the Hazardous Liquid Pipeline Safety Act of 1979, in part to serve as a sounding board for discussing pipeline safety policy issues. We are pleased with OPS's constructive response to our draft report and that the department plans to implement our recommendations on establishing goals for its enforcement program, defining a strategy for achieving those goals, and establishing a systematic approach to designing performance measures.

Regarding its use of civil penalties, OPS indicated that it plans to automate enforcement tracking to better ensure consistent application of policy across regional offices and improve management controls over the collection of civil penalties. To improve management controls over civil penalties collections, OPS explained that it envisions a solution using information technology to provide a transparent and real time tracking of civil penalty assessment activity between FAA, RSPA's Office of Chief Counsel, and OPS. We are pleased that until these enhancements can be deployed OPS has agreed to take the steps we recommended to improve management controls over the collection of civil penalties.

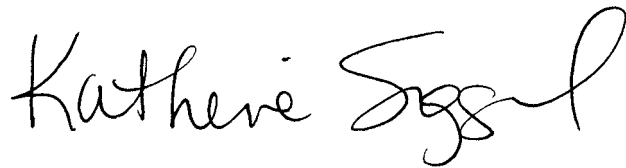
---

We are sending copies of this report to congressional committees and subcommittees with responsibility for transportation safety issues; the

---

Secretary of Transportation; the Administrator, RSPA; the Administrator, FAA; the Associate Administrator, OPS; and the Director, Office of Management and Budget. We will also make copies available to others upon request. This report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you have any questions about this report, please contact me at [siggerudk@gao.gov](mailto:siggerudk@gao.gov) or James Ratzenberger at [ratzenbergerj@gao.gov](mailto:ratzenbergerj@gao.gov). Alternatively, we can be reached at (202) 512-2834. Staff who made key contributions to this report are listed in appendix V.

A handwritten signature in black ink that reads "Katherine Siggerud". The signature is written in a cursive style with a large, looping initial 'S'.

Katherine A. Siggerud  
Director, Physical Infrastructure Issues

---

*Congressional Recipients*

The Honorable John McCain  
Chairman  
The Honorable Ernest F. Hollings  
Ranking Minority Member  
Committee on Commerce, Science  
and Transportation  
United States Senate

The Honorable Don Young  
Chairman  
The Honorable James L. Oberstar  
Ranking Democratic Member  
Committee on Transportation  
and Infrastructure  
House of Representatives

The Honorable Joe Barton  
Chairman  
The Honorable John D. Dingell  
Ranking Minority Member  
Committee on Energy and Commerce  
House of Representatives

---

# Scope and Methodology

---

To evaluate the effectiveness of the Office of Pipeline Safety's (OPS) enforcement strategy, we identified key elements of effective program management by reviewing our products on this subject, Office of Management and Budget guidance, and studies by the National Academy of Public Administration and the Urban Institute. We then determined the extent to which the office's strategy incorporates these three elements (clear program goals, a well-defined strategy for achieving goals, and measures of performance that are linked to program goals). For each element, we obtained information from OPS on its activities and plans and compared this information to the published criteria. We also reviewed the Web sites of selected regulatory agencies to determine how these other agencies measure enforcement results. As part of this work, we monitored OPS's efforts to develop a strategy that applies to all its enforcement activities and to improve its performance measurement capabilities. We supplemented these activities by interviewing pipeline safety stakeholders to obtain their views on the effectiveness of OPS's enforcement efforts. These stakeholders included industry trade associations, federal agencies, state agencies and associations, a local representative from Virginia, and pipeline safety advocacy groups. (Stakeholders that we contacted for this and other aspects of our work are listed at the end of this appendix.)

To examine OPS's civil penalty actions, we reviewed legislation; OPS regulations; and OPS manuals, guidelines, and protocols setting forth OPS's legal authority and policies and procedures for implementing this authority. We also obtained information from OPS, the Research and Special Programs Administration (RSPA), and the Federal Aviation Administration (FAA) about pipeline safety enforcement policies and procedures. (Since 1993, FAA's general accounting division has managed the accounts receivable for OPS's pipeline safety and RSPA's hazardous materials programs.) We discussed FAA's collection activities with OPS, RSPA's Office of Chief Counsel, and FAA officials.

In developing information about OPS's use of civil penalties, we analyzed civil penalty data from OPS's enforcement database and FAA's civil penalty receivables and collections database. Because neither OPS's nor FAA's civil penalty data were complete, we combined them into a single database. The data were incomplete in three ways. First, the OPS data set included penalties that were not in the FAA data set. Second, each data set had fields (variables) not contained in the other data set. Third, certain fields were common to both data sets, but the data for a particular enforcement action were present in one data set and missing in the other data set. For such variables, we substituted the available data for the missing data when

possible. In addition, OPS and FAA sometimes used different methods for numbering penalties. We converted all penalty numbers to a standard format so we could combine the two data sets. When data were inconsistent with other logically related data, we corrected the data using our best judgment. For example, if OPS data showed that the assessed amount was \$75,000, but both OPS and FAA data showed that the proposed amount was \$10,500 and FAA data showed that both the final order and collected amount was \$7,500 without any notation for the difference between \$7,500 and \$75,000, we assumed that the \$75,000 amount was a data entry error and corrected the assessed amount to be consistent with the collected amount. When possible, we supplemented data in the two data sets with data from other sources. For example, if OPS's Web site included a final notice with the assessed penalty amount, but this information was not captured in the data sets, we added the information to the combined data set. We also discussed our preliminary results with OPS and FAA, and their comments led to further corrections. For example, the combined OPS and FAA data suggested that 16 penalties had not been collected. After we discussed this information with OPS and FAA, they provided documentation showing that many fewer penalties were uncollected. For example, as discussed in the body of the report, FAA reported to us that 2 penalties had been paid recently, which was not reflected in the information reported to us by OPS. In addition, we determined that OPS closed 2 of the penalty cases without collecting the penalties, operators are appealing 5 penalties, OPS recently assessed 3 penalties, and OPS acknowledged that 4 penalties (totaling \$45,200) should have been collected.

In determining how OPS used its enforcement options to address noncompliance with pipeline safety regulations, we analyzed enforcement data for enforcement actions opened between 1994 and 2003 from OPS's enforcement database and FAA's civil penalty database. OPS's enforcement database contains information about instances when OPS has taken some type of enforcement action. OPS officials acknowledged that OPS's enforcement database lacked complete information on penalty collections and indicated that FAA tracks the collection of OPS's civil penalties. To assess the reliability of OPS's and FAA's data, we (1) performed electronic testing for obvious errors in accuracy and completeness and (2) interviewed officials from OPS's enforcement office and FAA's general accounting division who are knowledgeable about the data and how the data were entered. We consulted regularly with these officials to resolve the handling of problematic data entries. After these actions, and after making needed corrections, we determined that the data were sufficiently

reliable for the types of analyses we wanted to pursue for this report except to determine whether operators paid penalties in a timely manner. In this instance, the discrepancies between OPS's and FAA's data and between FAA's data and the case files we reviewed were too great for the data to be judged reliable. For example, we found that the collection dates in FAA's database did not match the hard-copy documentation for about half of 20 cases that we reviewed by hand.

OPS identifies each enforcement action in its enforcement database with a unique number. This number identifies the region, the year OPS initiated the action, the type of operator, and some types of enforcement actions. OPS's numbering system had certain characteristics that limited our ability to analyze the data as fully as we wanted. For example, the system does not identify enforcement actions where OPS used more than one type of enforcement, such as those that have both a compliance order and a notice of amendment, and it does not identify actions that have a compliance order. Therefore, we asked OPS to provide additional information detailing the enforcement and administrative actions taken in each instance. We used these data to divide the enforcement data into four sets of enforcement actions: civil penalties, other enforcement actions, administrative actions, and complex actions.

As discussed earlier in this report, our reporting of enforcement actions differs from OPS's. Whereas we report these actions for the year when OPS first responded to the related violation, OPS, in its annual enforcement summary report, reports the enforcement actions it has taken during that year, regardless of when it first responded to the related violations. The two reporting methods are not comparable.

As a means of better understanding OPS's civil penalty process, we reviewed 20 civil penalty actions initiated between 1992 through 2003. We chose penalties that, on their face, appeared large or small, seemed to have gone unpaid for a long period, may have involved repeat offenders, or appeared to have been reduced between the assessment and the collection. We reviewed the case file documentation and discussed the penalty with headquarters and regional enforcement officials. The number of penalties we reviewed was not large enough (usually about two to three penalty actions for each criterion we used) to draw any insights. Reviewing these files was time consuming, and reviewing a larger number of files, as well as obtaining any supporting documentation from the regional offices that initiated them, was not practical.

In determining whether OPS's civil penalties deter noncompliance, we interviewed pipeline safety stakeholders to obtain their views on the deterrent effect of OPS's civil penalties. These stakeholders included industry trade associations, pipeline companies, state agencies and associations, insurance companies, a local representative from Virginia, and pipeline safety advocacy groups. We supplemented the stakeholders' comments with information from economic literature on deterrence. The literature on deterrence that we reviewed included:

- A. Mitchell Polinsky and Steven Shavell, *The Economic Theory of Public Enforcement of Law*, *Journal of Economic Literature*, Vol. XXXVIII (March 2000);
- Oren Bar-Gill and Alon Harel, "Crime Rates and Expected Sanctions: The Economics of Deterrence Revisited," *Journal of Legal Studies*, Vol. XXX (June 2001), pp. 485-501;
- Isaac Ehrlich, "Crime, Punishment, and the Market for Offenses," *Journal of Economic Perspectives*, Vol. 10 (Winter 1996), pp. 43-67;
- Richard A. Posner, "Economic Analysis of Law." 3<sup>rd</sup> edition (1986), Little, Brown and Company; and
- Steven D. Levitt, "Why Do Increased Arrest Rates Appear to Reduce Crime: Deterrence, Incapacitation, or Measurement Error?" working paper #5286, National Bureau of Economic Research (September 1995).

---

## Other Aspects of Our Work

In determining how OPS's policies and procedures have changed over time, we conducted activities as described above to cover the period 1994 through 2003.

In determining whether OPS substitutes civil penalties for corrective action orders, we reviewed the underlying purposes of each enforcement action and discussed them with OPS headquarters and regional enforcement officials. We reviewed a very limited number of enforcement cases involving civil penalties, and none of these records indicated that one form of penalty had been substituted for another. Because of the substantial effort involved, it was not practical to review a large number of enforcement cases.

In learning how OPS's use of civil penalties compares to FAA's for air carriers, we used the information described above to summarize OPS's civil penalty information. We compared this information to similar information gathered under a concurrent engagement on FAA's enforcement activities.<sup>1</sup> We chose FAA as the comparison agency because it is another transportation safety agency and because information was readily available. Because considerable time and effort are needed to understand agencies' enforcement policies and practices, as well as to collect, ensure the quality of, and analyze data, it was not practical to expand the comparison to other agencies.

In determining the extent to which OPS had implemented the recommendations involving state activities in our May 2000 report, we asked OPS officials to describe the actions taken to implement the recommendations. We then interviewed all of the interstate agents to determine the extent to which they believed OPS had implemented our recommendations. In some instances, following interviews with interstate agents, we discussed with OPS the overall nature of the interstate agents' views. In assessing the extent to which OPS had implemented our recommendation on civil penalties, we discussed with OPS how it had responded to our recommendation. To determine whether it had made more use of the full range of its enforcement options, we examined data from OPS's pipeline incident processing enforcement system database and FAA's civil penalty receivables and collections database. We analyzed the data to determine the degree to which OPS used enforcement and administrative actions from 1995 through 2000 and compared these results with the use of these actions from 2000 through 2003.

Finally, in comparing changes in OPS's enforcement actions with industry and economic trends, we interviewed OPS officials to determine factors that they said influenced the trends in the number of enforcement actions they took from 1994 through 2003. We also asked pipeline safety stakeholders to identify factors that might have influenced OPS's enforcement and administrative actions during this period and used our own knowledge of the area to select others. The factors identified are those discussed in appendix IV. We then examined data from OPS's pipeline incident processing enforcement system database and FAA's civil penalty

---

<sup>1</sup>U.S. General Accounting Office, *Aviation Safety: Better Management Controls Are Needed to Improve FAA's Safety Enforcement and Compliance Efforts*, [GAO-04-646](#) (Washington, D.C.: July 6, 2004).



receivables and collections database by analyzing the trends in the number of enforcement and administrative actions that OPS took from 1994 through 2003 and comparing these data visually with the selected factors. We obtained data from OPS on pipeline accidents, pipeline mileage, and OPS's inspection activities. We obtained data on natural gas and petroleum consumption from the Energy Information Administration. We obtained data on new construction trends from the Census Bureau.

---

## Organizations Contacted

### *Department of Transportation*

Federal Aviation Administration  
Office of Inspector General  
Research and Special Programs Administration  
    Office of Pipeline Safety  
    Office of the Chief Counsel

### *Other Federal Agencies*

Environmental Protection Agency  
National Transportation Safety Board

### *Pipeline Industry*

American Gas Association  
Interstate Natural Gas Association of America  
American Petroleum Institute  
Association of Oil Pipe Lines  
Columbia Gas Transmission Corporation  
Hawaiian Electric Company  
Williams Midstream

### *Interstate Agents*

Arizona Corporation Commission  
California Department of Forestry and Fire Protection, State Fire Marshal  
Connecticut Department of Public Utility Control  
Iowa Utilities Board  
Michigan Public Service Commission  
Minnesota Department of Public Safety

---

**Appendix I**  
**Scope and Methodology**

---

New York Public Service Commission  
Public Service Commission of West Virginia  
Public Utilities Commission of Ohio  
Virginia State Corporation Commission  
Washington Utilities and Transportation Commission

*State Regulatory Associations*

National Association of Pipeline Safety Representatives  
National Association of Regulatory Utility Commissioners

*Pipeline Safety Advocates*

Citizens for Safe Pipelines  
Cook Inlet Keeper  
Pipeline Safety Trust  
SAFE Bellingham

*Insurance Companies*

AIG Global  
Aon Risk Services

*Other*

City Attorney, City of Fredericksburg, Virginia  
Northwestern University, Evanston, Illinois

---

# Other Pipeline Safety Enforcement Issues

---

To address other issues required under the 2002 pipeline safety act and additional issues of interest to you, we examined (1) how OPS's enforcement policies and procedures have changed since 1990, (2) whether OPS substitutes corrective action orders for civil penalties, and (3) how OPS's policies and enforcement actions compare with those of FAA.

---

## OPS's Enforcement Policies and Procedures Have Changed Since 1990

OPS's enforcement approach has evolved as its policies and procedures have changed. OPS policies have gone through three phases since 1990: (1) the standard inspection phase (1990 through 1994), (2) the risk management demonstration phase (1995 through 1999), and (3) the integrity management phase (2000 to the present).

- **Standard inspection phase**—During this phase, OPS enforced its minimum safety standards, conducting what it called standard inspections, to ensure that each pipeline operator complied with each pipeline safety regulation. OPS trained inspectors to complete inspection forms that covered all operations, but did not differentiate between high-risk and low-risk requirements. Individual OPS inspectors primarily conducted inspections on a unit basis.<sup>1</sup> OPS used all enforcement options.
- **Risk management demonstration phase**—During this phase, OPS still focused most of its resources on enforcing minimum safety standards, but it also began to encourage individual operators to focus their resources on the greatest risks to their pipeline systems. OPS also began to use teams of OPS inspectors to evaluate an operator's entire pipeline system. The inspection goal was to determine whether the operator had any systemic safety issues that it needed to address. OPS emphasized partnering with the pipeline operators to improve pipeline safety rather than punishing noncompliance. As a result, OPS issued fewer civil penalties and more administrative actions to address noncompliance.
- **Integrity management phase**—In this phase, OPS shifted its focus from enforcing minimum safety standards to more comprehensive

---

<sup>1</sup>A unit is a portion of a pipeline system that can reasonably be evaluated in 2 to 3 days using the standard inspection process. OPS identifies individual inspection units on each company's pipeline system. The number of units in a pipeline system depends on the size of the system.

inspections of pipeline operators, known as the integrity management program. As a result, OPS conducted fewer inspections because each inspection took more time and covered more miles of pipeline than a standard inspection. However, the integrity management inspections identified more violations than if OPS had continued inspections of the more established minimum safety standards.<sup>2</sup> OPS concentrated its enforcement actions on ensuring that operators' risk identification and mitigation procedures were sufficient and primarily relied on its notices of amendment to give operators experience in implementing the complex regulations. More recently, OPS has begun to propose civil penalties. OPS is also developing a new enforcement tool—the safety order—that encourages operators to take action to remedy safety-related conditions. OPS plans to use the safety order to direct the operator to remedy safety-related conditions that could significantly change or restrict pipeline operations; however, unlike the conditions identified in a corrective action order, these would be conditions that did not pose an immediate threat to life or property. Tremendous pipeline failures in Bellingham, Washington, in June 1999 and in Carlsbad, New Mexico, in August 2000, and reports by the Department of Transportation's Inspector General<sup>3</sup> and by us led OPS to abandon its partnering approach in favor of what it termed a “tough but fair” enforcement approach.

---

### OPS Does Not Substitute Corrective Action Orders for Civil Penalties

According to OPS, the agency does not substitute corrective action orders for civil penalties because OPS levies corrective action orders and civil penalties for different reasons. OPS imposes a corrective action order on a pipeline operator when it finds a situation that presents an imminent hazard to life or property that needs to be addressed. OPS does not have to find that the operator has violated its regulations before issuing a corrective action order. For example, earlier this year, OPS issued a corrective action order that directed an operator to reduce operating

---

<sup>2</sup>According to OPS, there is a better chance of discovering noncompliant operators with the relatively new risk-based integrity management regulations than there is with the current minimum safety regulations because under the risk-based approach, safety inspectors look at the pipeline comprehensively rather than in segments. In addition, because operators are more familiar with the minimum safety standards, they are better able to meet them.

<sup>3</sup>Office of Inspector General, U.S. Department of Transportation. *Pipeline Safety Program: Research and Special Programs Administration*, RT-2000-069 (Washington, D.C.: Mar. 13, 2000).

pressure when OPS could not determine the cause of a pipeline failure. In contrast, civil penalties are not used to correct the underlying safety violations. Rather, OPS uses civil penalties as sanctions for violating federal pipeline safety regulations and uses other enforcement tools, such as corrective action orders, to correct safety violations. For example, in 2001, OPS assessed a \$37,500 civil penalty against an operator that did not follow OPS's procedures during an annual test of the company's emergency shutdown system. OPS used the penalty as a sanction and took no further action. In this case, the operator already had a procedure in place but did not follow it. If OPS had found that the operator's procedures were inadequate, it could have both issued a notice of amendment requiring the operator to bring its procedures in line with OPS's regulations and imposed a civil penalty as a sanction for having inadequate procedures.

---

### OPS and FAA Have Different Regulations and Processes for Using Civil Penalties

Both OPS and FAA, in its oversight of the aviation industry, use civil penalties, among other enforcement actions, to deter noncompliance with their safety regulations.<sup>4</sup> While OPS regulates and may issue civil penalties to operators of pipeline systems, FAA regulates and may issue civil penalties to aircraft operators, airports, and individuals involved in air transport, such as pilots and mechanics.<sup>5</sup>

Both OPS's and FAA's processes for issuing civil penalties allow for due process, through opportunities afforded to regulated entities to present evidence that may lead the regulator to reduce or withdraw the penalties. (See table 5.) The maximum penalties that each agency can impose differ significantly. OPS may impose penalties for pipeline operators up to a statutory maximum of \$100,000 per day per violation up to a statutory maximum of \$1 million per case, whereas FAA may impose much smaller penalties for aircraft operators—up to \$11,000 per violation of federal

---

<sup>4</sup>See [GAO-04-646](#) for information on FAA's enforcement program.

<sup>5</sup>For purposes of comparing OPS's and FAA's use of civil penalties, we chose to limit our analysis of FAA's use of these penalties to its use as applied to selected aircraft operators because, as providers of a means of transportation, aircraft operators are more similar to pipeline operators than are other entities that FAA regulates. The aircraft operators we selected include domestic air carriers or commercial operators engaged in the common carriage of passengers or freight, as well as aircraft operators engaged in other operations, such as some on-demand (air taxi) operators, using U.S.-registered civil airplanes capable of seating 20 or more passengers or carrying a maximum payload of at least 6,000 pounds. We believe these operators most closely parallel in the aviation industry the kind of operators found in the pipeline industry.

**Appendix II  
Other Pipeline Safety Enforcement Issues**

aviation regulations or up to \$30,000 per violation of RSPA's hazardous materials regulations. However, FAA has no statutory maximum penalty per case.

**Table 5: OPS's and FAA's Regulations and Processes for Issuing Civil Penalties**

<b>Regulation/process</b>	<b>OPS</b>	<b>FAA, as it applies to selected aircraft operators</b>
Type of safety regulations	Pipeline safety regulations include requirements for the operation, maintenance, and construction of pipelines; management of pipeline integrity; operator qualifications; and recordkeeping and reporting.	Federal aviation regulations include requirements for aircraft maintenance, flight operations, qualifications of personnel, and recordkeeping and reporting. FAA also enforces RSPA's regulations for handling hazardous materials to the extent that these regulations relate to air transportation.
Process for identifying violations	Inspections by OPS or state officials or accident investigations	Inspections by FAA officials or their designees, including air traffic controllers
Maximum civil penalty	\$100,000 per day per violation up to a maximum of \$1 million per case	\$11,000 per violation of federal aviation regulations, with no maximum amount per case  \$30,000 per violation of hazardous materials regulations, with no maximum amount per case
Process for proposing penalties and determining penalty amounts	Inspector identifies a potential violation and regional director proposes a penalty amount, taking into account factors mandated in statute.  OPS sends a notice of probable violation, with a proposed civil penalty, to pipeline operator.  The operator may pay the penalty or provide additional information and may request a hearing. Evidence presented by the operator may cause the penalty to be affirmed, reduced, or withdrawn.	Inspector identifies a violation and recommends a civil penalty amount to regional program and legal offices, using FAA's enforcement sanction guidance. The regional program and legal offices review the proposed penalty and may change it.  FAA notifies the air carrier of the initial penalty amount. <sup>a</sup>  The air carrier may pay the penalty or confer informally with FAA about the case. Evidence presented by the air carrier may cause the penalty to be affirmed, reduced, or withdrawn.
Process for assessing and collecting penalties	OPS issues a final order assessing a civil penalty to the pipeline operator.  The pipeline operator may request reconsideration of the penalty by RSPA's chief counsel.  The pipeline operator pays the penalty. FAA acts as OPS's collection agent.	FAA issues a final order or letter assessing a civil penalty to the air carrier.  The air carrier may appeal the penalty, and a hearing will be conducted.  The air carrier pays the penalty. FAA acts as its own collection agent.

Source: GAO analysis of OPS and FAA information.

<sup>a</sup>In situations where the proposed penalties exceed \$50,000 or involve suspending or revoking an entity's certificate, the headquarters legal office reviews the penalty. Proposed penalties that exceed \$400,000 are sent to the Department of Justice for settlement.

Another difference between the two agencies' civil penalty processes is that FAA has more detailed guidance on setting penalty amounts than OPS. FAA's guidance lists types of violations with a corresponding range of civil penalty amounts for each and also lists factors that should be considered in setting the penalty level. OPS considers broad statutory factors in determining civil penalty amounts and is developing more detailed guidance for making these determinations as part of its efforts to develop an enforcement policy and detailed internal guidelines that reflect its current enforcement strategy.

FAA issues many more civil penalties each year than OPS. (See table 6.) From 1994 through 2002, FAA issued more than 10 times as many civil penalties to aircraft operators as OPS issued to pipeline operators. However, the average civil penalties that FAA assessed to the aircraft operators and that we included in our analyses were lower than the average civil penalties that OPS assessed to pipeline operators (\$14,100 versus \$21,300). In addition, during this period, FAA reduced the civil penalties it had proposed before assessing them to a much greater degree than did OPS. Specifically, the total assessed penalties that FAA issued to aircraft operators were 59 percent lower than the total proposed penalties (\$34.7 million versus \$84.0 million),<sup>6</sup> whereas the total assessed penalties that OPS issued to pipeline operators were 19 percent lower than the total proposed penalties (\$4.2 million versus \$5.2 million). Our comparison of OPS's and FAA's use of civil penalties was designed to provide some descriptive information but not to evaluate the two agencies' use of these penalties or to investigate the reasons for any differences.

---

<sup>6</sup>See [GAO-04-646](#) for a discussion of FAA's reduction of penalties from proposed amounts.

**Appendix II**  
**Other Pipeline Safety Enforcement Issues**

**Table 6: OPS's and FAA's Use of Civil Penalties, 1994 through 2002**

	OPS	FAA, as civil penalties apply to selected aircraft operators
Average number of civil penalties assessed per year	22	285
Average/median civil penalty assessed per year	\$21,300/\$8,500	\$14,100/\$5,000
Percentage reduction from proposed to assessed penalties for the 9-year period <sup>a, b</sup>	19%	59%

Source: GAO analysis of OPS and FAA enforcement data.

Note: We did not include data for 2003 in this analysis because the FAA data available to us included only closed civil penalty enforcement actions and the number of FAA civil penalties would have been smaller in that year if we had included it, since some 2003 civil penalty actions have not yet been closed. OPS's data include open and closed civil penalty enforcement actions.

<sup>a</sup>Includes all enforcement actions with both proposed and assessed penalties and was calculated by determining the percentage reduction from the total penalties proposed for the 9-year period to the total penalties assessed for that period. The resulting figure for OPS—19 percent—differs from the 37 percent figure reported for OPS in table 4 because this latter figure indicates the percentage reduction only for the 31 percent of proposed civil penalties that OPS reduced. By contrast, the table above compares the overall reductions that OPS and FAA made in the penalties that they initially proposed. We did not compare OPS's and FAA's civil penalty collections because we lacked comparable data for such an analysis.

<sup>b</sup>FAA uses the terms "initial" and "final" rather than "proposed" and "assessed" when referring to civil penalties. For simplicity, this report refers to FAA's initial and final penalties as proposed and assessed penalties, respectively.



---

# OPS's Implementation of Recommendations Made in Our May 2000 Report

---

In May 2000, we made three recommendations to the Secretary of Transportation to improve OPS's pipeline safety program.<sup>1</sup> Two of the recommendations proposed wider use of interstate agents and the third dealt with OPS's use of civil penalties. We found that OPS implemented two of these recommendations and implemented the intent of the third.

---

## OPS Has Involved Interstate Agents More in Federal Pipeline Safety Activities

In response to our recommendation that OPS work with state pipeline safety officials to determine how best to involve them in federal pipeline safety activities, OPS told us that it had modified its interstate pipeline oversight program to allow more opportunities for state participation. OPS informed us that the 11 qualified states may inspect the construction of new pipelines, oversee rehabilitation projects and integrity management programs, investigate accidents, conduct inspections, and participate in nonregulatory program initiatives. In addition, according to OPS, states that do not qualify as interstate agents may apply to participate in specific, short-term activities such as inspecting the construction of a new pipeline or investigating a pipeline accident.

We contacted all 11 interstate agents to determine the extent to which they participate with OPS in implementing federal pipeline safety efforts. Ten of the 11 interstate agents told us that OPS was implementing our recommendation as OPS said it was doing. These 10 states said they assisted OPS by participating in at least one of the activities mentioned above. The eleventh state said that OPS had not changed its method of involving the state; however, this state agreed that communication between the two parties had improved.

Although nearly all of the 11 interstate agents said that OPS was implementing this recommendation, 7 said OPS was too slow in letting them know which actions it had taken or planned to take in response to the potential noncompliance that the interstate agents had discovered during inspections. For example, two interstate agents commented that once they notified OPS of noncompliant activity, the case seemed to go into what they described as a "black hole"—indicating that they never heard anything else from OPS about the matter. One of these two interstate agents told us that it was very difficult for it to conduct adequate follow-up inspections (i.e., those conducted at pipeline companies to determine whether previously

---

<sup>1</sup>[GAO/RCED-00-128](#).

found problems have been corrected) without knowing what actions, if any, OPS had taken or planned to take. This interstate agent also noted that once, after it alerted OPS to noncompliant activity at one company, it found the same violation 2 years later during the next scheduled inspection cycle.

We brought the interstate agents' concerns to OPS's attention and, according to the agency, it is now providing interstate agents with information on the actions it took or will take in response to the agents' notices of noncompliant activity. OPS officials told us that effective November 2003, OPS began disposing of noncompliance cases in writing for interstate agents within 60 days after receiving notices of operator noncompliance from interstate agents—as required by the Pipeline Safety Improvement Act of 2002.

On the basis of our discussions with OPS and the interstate agents, we believe that OPS has implemented this recommendation.

---

### OPS Has Involved Interstate Agents in Its Integrity Management Program

In response to our recommendation that OPS allow interstate agents to help review integrity management programs developed by the pipeline companies that operate in their states to ensure that these companies have identified and adequately addressed safety risks to their pipeline systems, OPS told us that it had revised its interstate agent agreements with qualified states to implement this recommendation.

In determining the extent to which interstate agents participate with OPS in reviewing integrity management plans, we contacted the six interstate agents that have agreements with OPS under the agency's hazardous liquid integrity management program.<sup>2</sup> Five of them agreed that OPS was implementing this recommendation as OPS told us it was doing. The one interstate agent that did not believe OPS had implemented this recommendation (the same interstate agent that did not believe OPS had implemented our previously discussed recommendation) told us that while it was allowed to attend and observe one integrity management inspection, it was not allowed to participate—that is, it was not allowed to ask questions during the inspection. According to OPS, this was before RSPA's Chief Counsel provided interstate agents with verbal guidance stating that

---

<sup>2</sup>We did not contact interstate agents under OPS's natural gas program because the natural gas integrity management rule was issued in December 2003—too late for operators to gain experience before we completed our fieldwork.

states could participate in integrity management inspections held outside their boundaries if the hosting state granted permission.

On the basis of our discussions with OPS and the interstate agents, we believe that OPS has implemented this recommendation.

In discussing both recommendations, we asked the interstate agents about the degree of partnership between them and OPS. For the first recommendation, 7 of the 11 interstate agents said there was or was close to being a true partnership with OPS. However, 3 others thought that better communication could improve the partnership between the two entities. The remaining interstate agent thought that by acknowledging the pipeline safety expertise that interstate agents acquired under the states' intrastate pipeline programs, OPS could also improve the partnership between the two parties. For the second recommendation, 4 of the 6 interstate agents said there was or was close to being a true partnership with OPS.<sup>3</sup> One of the 4 interstate agents thought the partnership could improve if OPS gave more advance notice so that interstate agents could make travel arrangements to attend integrity management inspections. The fifth interstate agent told us it did not want to offer an opinion on whether it thought a partnership with OPS existed. It wanted an opportunity to work with OPS on implementing integrity management requirements for natural gas. The remaining interstate agent (the same interstate agent that did not believe OPS had implemented either of these recommendations) thought there was no partnership with OPS because the agent had been allowed only to observe the integrity management inspections.

---

### OPS Implemented the Intent of Our Recommendation to Examine the Effect of Its Reduced Use of Civil Penalties

We recommended that the Secretary of Transportation require that OPS determine whether its reduced use of civil penalties has maintained, improved, or decreased compliance with pipeline safety regulations. OPS said that it could not determine the impact of its reduced use of civil penalties on compliance because it did not have sufficient data to do so. The agency concluded that its decreased reliance on civil penalties did not allow it to adequately address safety concerns and was perceived

---

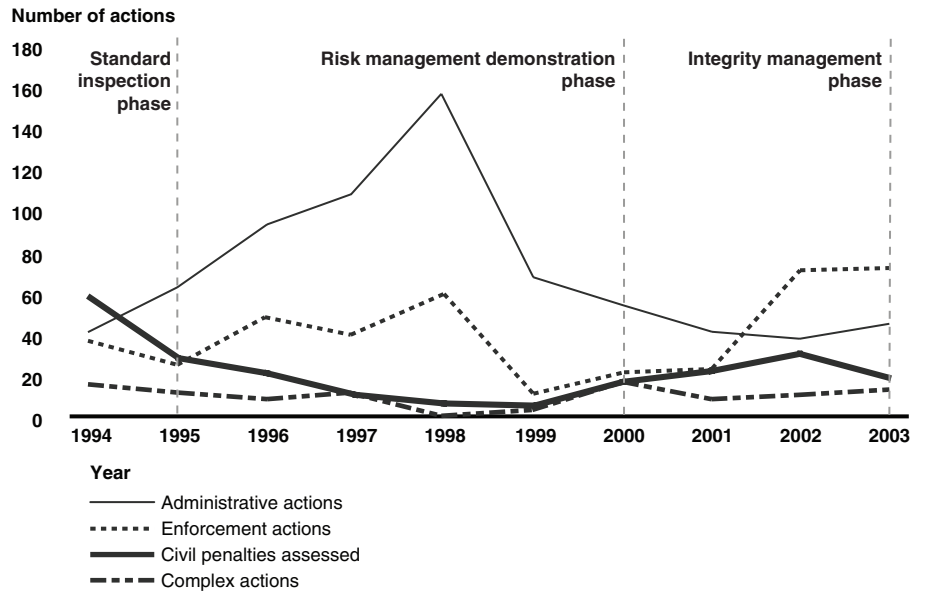
<sup>3</sup>One of these 4 interstate agents thought there was a true partnership with OPS in implementing the integrity management program for small hazardous liquid pipeline operators (those with less than 500 miles of pipeline), but not for large hazardous liquid operators because these inspections could have as many as three different states involved, and it was difficult to reach consensus.

negatively by the public and Congress. OPS subsequently changed its enforcement policy to make fuller use of its range of enforcement tools, including increasing the number and size of civil penalties.

While OPS did not strictly implement our recommendation, its actions to make fuller use of all its enforcement tools adhere to the intent of the recommendation. In 1994, at the very end of OPS's standard inspection phase, OPS issued 42 administrative actions and 95 enforcement actions. (See fig. 7.) From 1995 through 1998, during its partnering phase, OPS increased its use of administrative actions, while issuing fewer civil penalties and non-civil-penalty enforcement actions. After 1998, OPS decreased its use of administrative actions. However, the agency did not increase its use of enforcement actions until 2000 when it began its "tough but fair" phase. (See app. II for more information on OPS's policy phases.)

**Appendix III  
OPS's Implementation of Recommendations  
Made in Our May 2000 Report**

**Figure 7: OPS's Policy Eras and Enforcement and Administrative Actions, 1994 through 2003**



Source: GAO analysis of OPS enforcement data and FAA data.

Notes: A complex action occurs when OPS takes more than one enforcement and/or administrative action against an operator. Generally, these actions include both enforcement and administrative actions. OPS officials told us that one of the important enforcement tools it uses in complex actions is the compliance order. OPS data show that the agency issued an average of 23 compliance orders per year from 1994 through 2003.

This figure does not include 23 cases for which OPS data do not identify the associated individual actions. As a result, we were not able to place these cases in any of the four categories.

---

# OPS's Enforcement Policies Influenced Trends in Enforcement and Administrative Actions

---

The primary influence on trends in OPS's enforcement and administrative actions has been changes in OPS's enforcement policies. These policy changes coincided with changes in OPS's leadership. Other factors that contributed to OPS's policy changes and ultimately influenced trends in the agency's enforcement and administrative actions were two serious pipeline accidents and reports on them from the Department of Transportation's Inspector General and from us on improvements needed in OPS's pipeline safety program.<sup>1</sup> To explore whether there were other possible explanations for the trends in enforcement and administrative actions, we analyzed trends in pipeline accidents, pipeline mileage, OPS's inspection activities, natural gas and petroleum consumption, and new construction and compared them with the trends in OPS's enforcement and administrative actions. We found that none of these data series appear to be strongly associated with the trends in OPS's enforcement and administrative actions.

---

## OPS's Use of Enforcement and Administrative Actions Has Varied with Policy Changes

OPS's use of enforcement and administrative actions has evolved with changes in the agency's enforcement policies and leadership. As discussed in appendix II, OPS's enforcement policies have gone through three phases since 1990: (1) the standard inspection phase (1990 through 1994), which emphasized across-the-board compliance; (2) the risk management demonstration phase (1995 through 1999), which focused on partnering with the industry to address the highest risks; and (3) the integrity management phase (2000 to the present), which continued to focus on the highest risks but also took a "tough but fair" approach to enforcement. OPS officials told us that the enforcement policy changes reflected in these three phases have been the primary influence on the trends in OPS's enforcement and administrative actions. In addition, we observed that these policy phases appear to coincide with changes in OPS's leadership; new associate administrators came on board in 1995 and mid-2000. Finally, according to OPS officials, the agency's latest policy change was also influenced by two major pipeline accidents in 1999 and 2000 that focused public and congressional attention on pipeline safety and led to the previously cited reports by the Department of Transportation's Inspector General and by us.

---

<sup>1</sup>Office of Inspector General. U.S. Department of Transportation. *Pipeline Safety Program: Research and Special Programs Administration*, RT-2000-069 (Washington, D.C.: Mar. 13, 2000) and [GAO/RCED-00-128](#).

The changes in OPS's enforcement policies and leadership roughly parallel the trends in OPS's enforcement actions. (See fig. 7 in app. III.) As previously discussed, in 1994, at the very end of OPS's standard inspection phase, OPS issued 42 administrative actions and 95 enforcement actions. From 1995 through 1998, during its partnering phase, OPS increased its use of administrative actions, while decreasing its use of civil penalties and other enforcement actions. After 1998, OPS's use of administrative actions decreased. In 2000, when OPS initiated its "tough but fair" phase, its use of enforcement actions started to rise.

---

## Pipeline Accidents

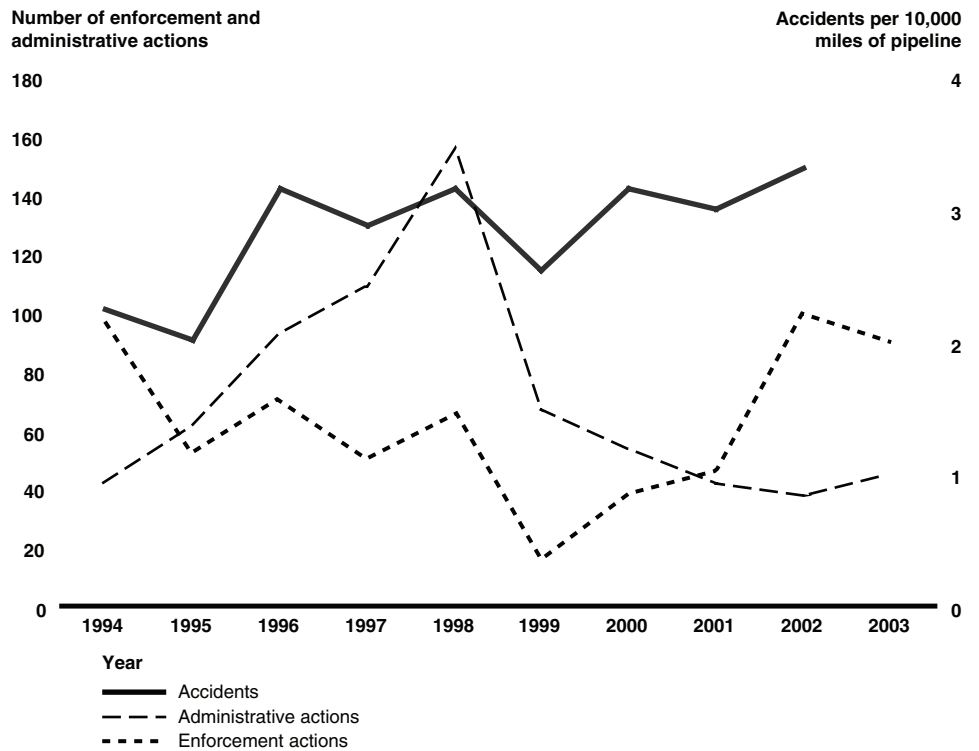
Long-term trends in the numbers of serious pipeline accidents and in the accident rate for interstate hazardous liquid pipelines do not appear to be associated with trends in OPS's enforcement and administrative actions. As discussed earlier in this report, trends in the numbers of serious accidents for interstate natural gas and hazardous liquid pipelines were mixed from 1994 through 2003. (See figs. 2 and 3.) These trends do not parallel the wide fluctuations in the numbers of enforcement and administrative actions that OPS took during the same period. Over this same period, the accident rate for interstate hazardous liquid pipelines—that is, the number of serious accidents per billion ton-miles of hazardous liquids shipped—decreased, while the numbers of OPS enforcement and administrative actions fluctuated.

For the number of *all* pipeline accidents per 10,000 miles of pipeline (where volume of products supported is not included), there appears to be some association between the number of accidents per 10,000 miles of pipeline and OPS's enforcement actions but no association between the number of accidents per 10,000 miles of pipeline and OPS's administrative actions. (See fig. 8.) This metric, like the standard inspections that OPS conducted from 1990 through 1994, does not take risk into account; it considers only the mileage of pipelines in place, not the amounts of products shipped—or, by implication, the risks involved in shipping them. The number of accidents per 10,000 miles of pipeline increased somewhat steadily during the period of our review, growing by almost 50 percent, from about 2.2 accidents per 10,000 miles of interstate pipeline in 1994 to 3.3 such accidents in 2002 (latest data available). At least through 2000, the number of accidents per 10,000 miles of interstate pipeline and the number of OPS enforcement actions moved together. This parallel movement might suggest, if all else were equal, that OPS primarily took enforcement actions when serious accidents occurred. However, most OPS enforcement actions were the result of its routine inspections—not as a result of accident

**Appendix IV**  
**OPS's Enforcement Policies Influenced**  
**Trends in Enforcement and Administrative**  
**Actions**

investigations. The number of accidents per 10,000 miles of interstate pipeline does not appear to coincide with the number of OPS administrative actions during this period.

**Figure 8: OPS's Enforcement and Administrative Actions and Interstate Pipeline Accidents per 10,000 Miles of Pipeline, 1994 through 2003**



Source: GAO analysis of OPS and FAA data.

Note: This figure does not include the complex actions included in figure 7 because these comprise both enforcement and administrative actions, and OPS's enforcement database does not provide enough information for us to separate the actions into these two categories. The figure also does not include 23 actions that OPS's database does not identify by type. The remaining figures in this section also exclude these complex and unidentified actions.

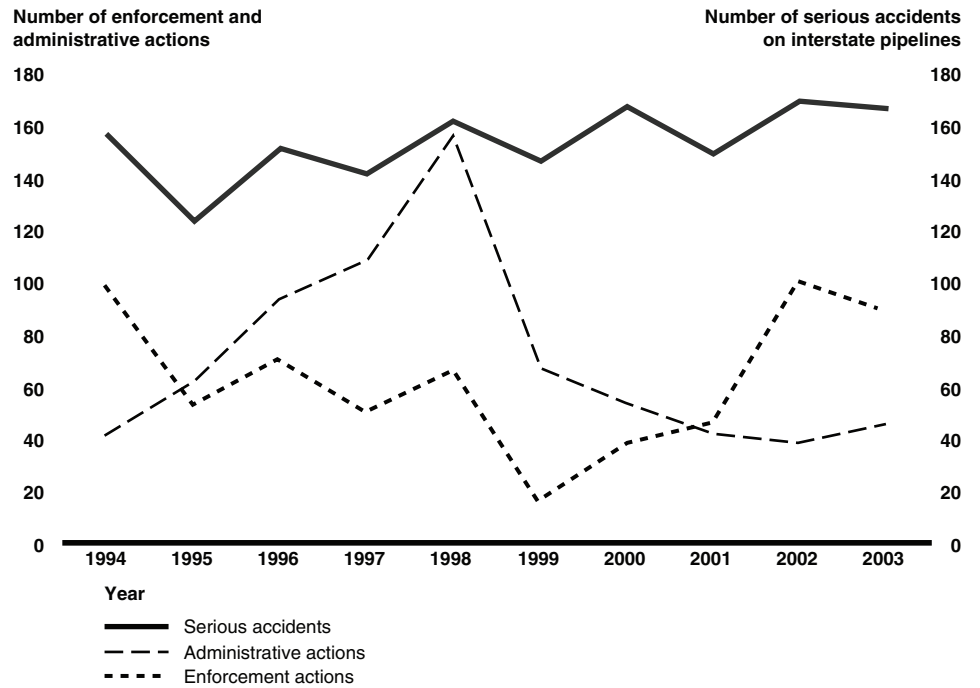
The trend in the number of *serious* interstate pipeline accidents (those causing a fatality, an injury, or \$50,000 or more in property damage) per 10,000 miles of pipeline, like the trend in the number of all pipeline accidents, appears to parallel the trend in OPS's enforcement actions, but not the trend in OPS's administrative actions. (See fig. 9.) During the period of our review, the number of serious interstate pipeline accidents



**Appendix IV**  
**OPS's Enforcement Policies Influenced**  
**Trends in Enforcement and Administrative**  
**Actions**

rose by more than 6 percent, from 156 in 1994 to 166 in 2003, and generally followed the same pattern as the number of enforcement actions. However, for serious accidents as for all accidents, there does not appear to be a logical connection between these trends. Furthermore, for serious accidents, as for all accidents, the trends in the number of accidents and in OPS's administrative actions do not appear to move together.

**Figure 9: OPS's Enforcement and Administrative Actions and Serious Interstate Pipeline Accidents, 1994 through 2003**



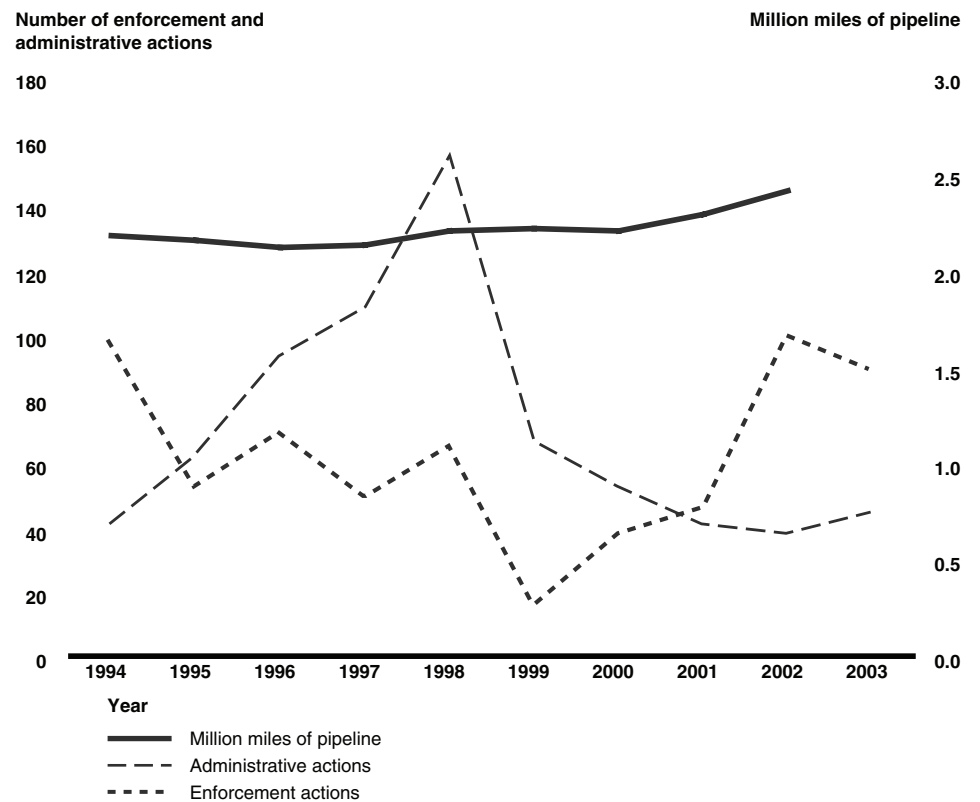
Source: GAO analysis of OPS and FAA data.

**Appendix IV**  
**OPS's Enforcement Policies Influenced**  
**Trends in Enforcement and Administrative**  
**Actions**

**Pipeline Miles**

The trend in the number of pipeline miles since 1994 does not appear to be associated with the trends in OPS's enforcement and administrative actions. (See fig. 10.) From 1994 through 2002 (latest data available), the miles of pipeline in the United States increased by almost 11 percent, from almost 2.2 million miles in 1994 to more than 2.4 million miles in 2002. However, the numbers of enforcement and administrative actions that OPS issued during this period varied.

**Figure 10: OPS's Enforcement and Administrative Actions and Miles of Pipeline, 1994 through 2003**



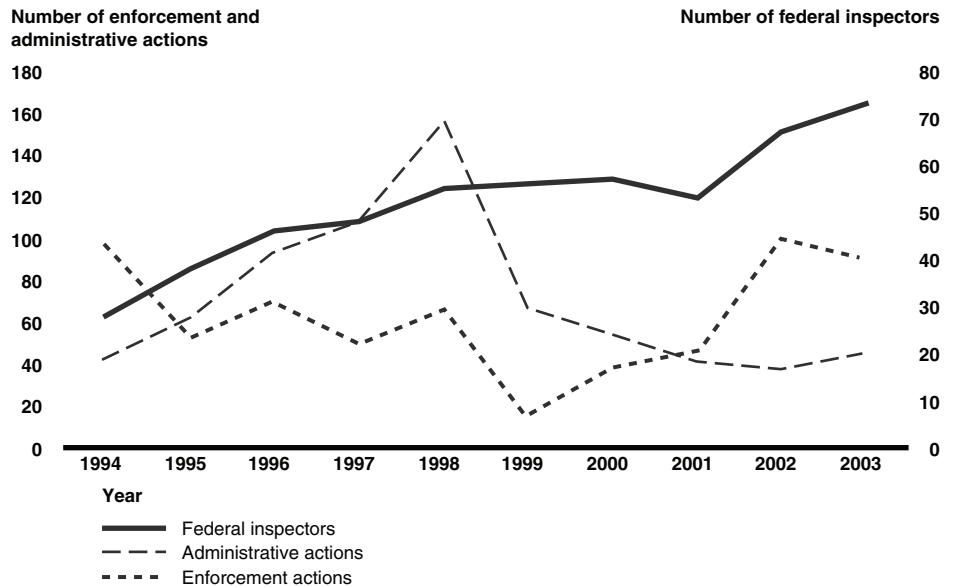
Source: GAO analysis of OPS and FAA data.

**Appendix IV**  
**OPS's Enforcement Policies Influenced**  
**Trends in Enforcement and Administrative**  
**Actions**

**Number of OPS Inspectors, Inspections, Inspection Days, and Types of Inspections**

Our analysis shows no strong apparent association between the number of OPS inspectors on line, the number of inspections conducted by OPS inspectors, or the number of days OPS inspectors spent away from the office conducting inspections and the number of OPS's enforcement and administrative actions. (See fig. 11.) The number of OPS inspectors on line more than doubled from 1994 through 2003, increasing from 28 in 1994 to 73 in 2003 at a fairly steady rate. Over the same period, the number of OPS's enforcement and administrative actions fluctuated widely.

**Figure 11: OPS's Enforcement and Administrative Actions and Number of OPS Inspectors, 1994 through 2003**



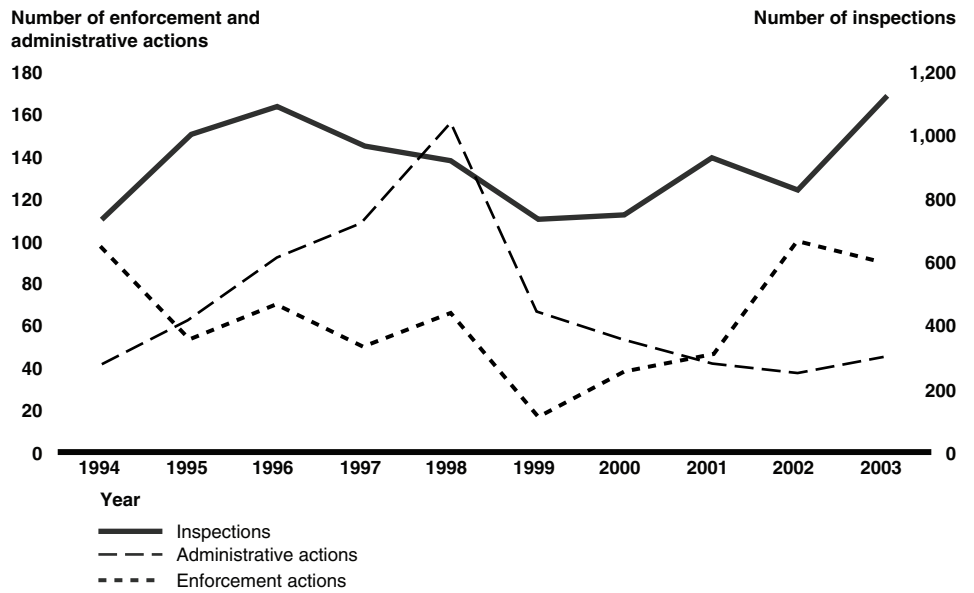
Source: GAO analysis of OPS and FAA data.

Note: This figure does not include management personnel or state inspectors that conduct federal inspections for OPS.

**Appendix IV**  
**OPS's Enforcement Policies Influenced**  
**Trends in Enforcement and Administrative**  
**Actions**

The number of inspections conducted by OPS inspectors varied from 1994 through 2003. (See fig. 12.) The fewest inspections occurred in 1994 and 1999 (about 730 each year), and the most took place in 1996 (almost 1,100) and 2003 (about 1,120). These changes in the number of inspections do not appear to be associated with the trends in OPS's enforcement and administrative actions, which also varied over the same period but often in different directions and at different times.

**Figure 12: OPS's Enforcement and Administrative Actions and Inspections Conducted, 1994 through 2003**

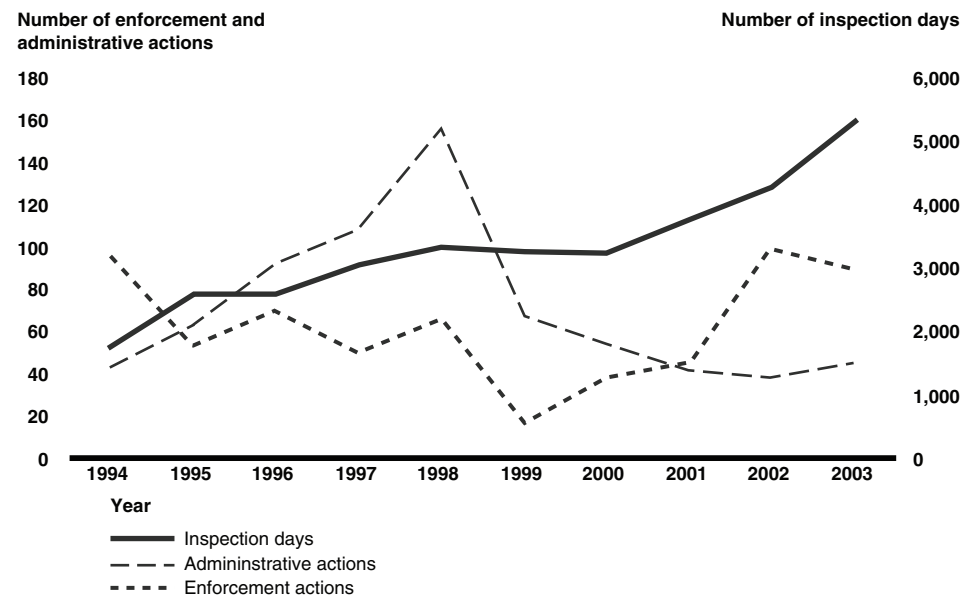


Source: GAO analysis of OPS and FAA data.

**Appendix IV**  
**OPS's Enforcement Policies Influenced**  
**Trends in Enforcement and Administrative**  
**Actions**

The time OPS inspectors spent conducting inspections does not appear to be associated with the numbers of enforcement and administrative actions they took. (See fig. 13.) The number of days they spent away from the office conducting inspections more than doubled, increasing fairly steadily from more than 1,700 in 1994 to almost 5,300 in 2003, while the numbers of enforcement and administrative actions they took over the same period fluctuated widely.

**Figure 13: OPS's Enforcement and Administrative Actions and Time Taken to Conduct Inspections, 1994 through 2003**



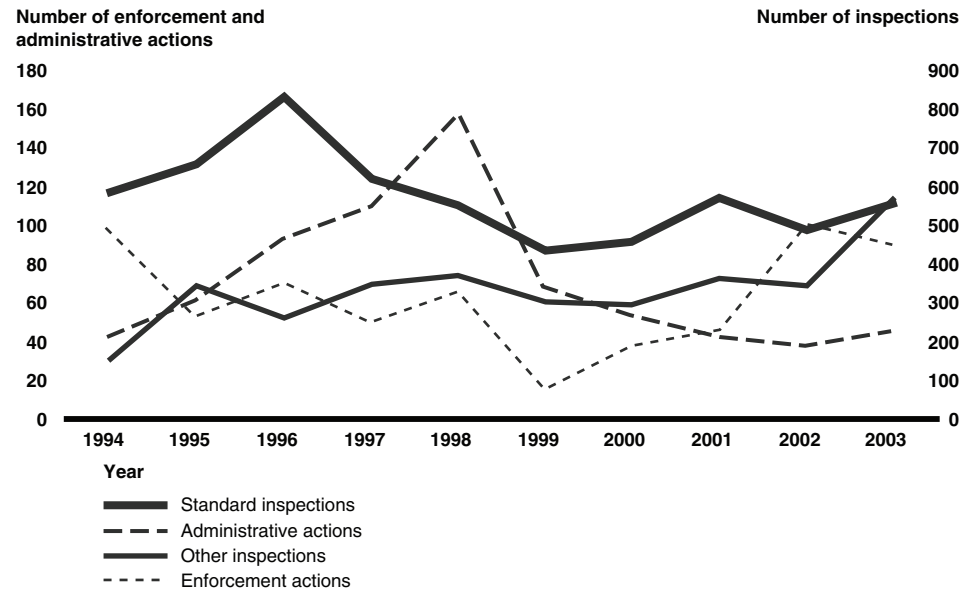
Source: GAO analysis of OPS and FAA data.

Our analysis points to a possible association between the types of inspections conducted and OPS's enforcement and administrative activity. The number of standard inspections—those designed to assess compliance with OPS's minimum safety standards—appears to be loosely associated with the numbers of enforcement actions and administrative actions taken over the period. (See fig. 14.) The number of standard inspections varied from about 580 in 1994 to about 550 in 2003, peaking at 830 in 1996. The number of other inspections that OPS conducts, including construction inspections, accident investigations, and integrity management inspections, increased from about 150 in 1994 to about 560 in 2003. For

**Appendix IV**  
**OPS's Enforcement Policies Influenced**  
**Trends in Enforcement and Administrative**  
**Actions**

many but not all of the years covered, the numbers of enforcement and administrative actions paralleled the numbers of standard and other inspections, albeit at a later date. One interpretation of this apparent linkage is that changes in inspection activity led to similar but later changes in enforcement activity. (The lag in enforcement activity reflects the time taken for inspectors to interpret their inspection results and gain management approval for any enforcement actions to be taken.) However, this interpretation is not consistent with the data for the entire 10-year period.

**Figure 14: OPS's Enforcement and Administrative Actions and Inspections Conducted, by Type of Inspection, 1994 through 2003**



Source: GAO analysis of OPS and FAA data.

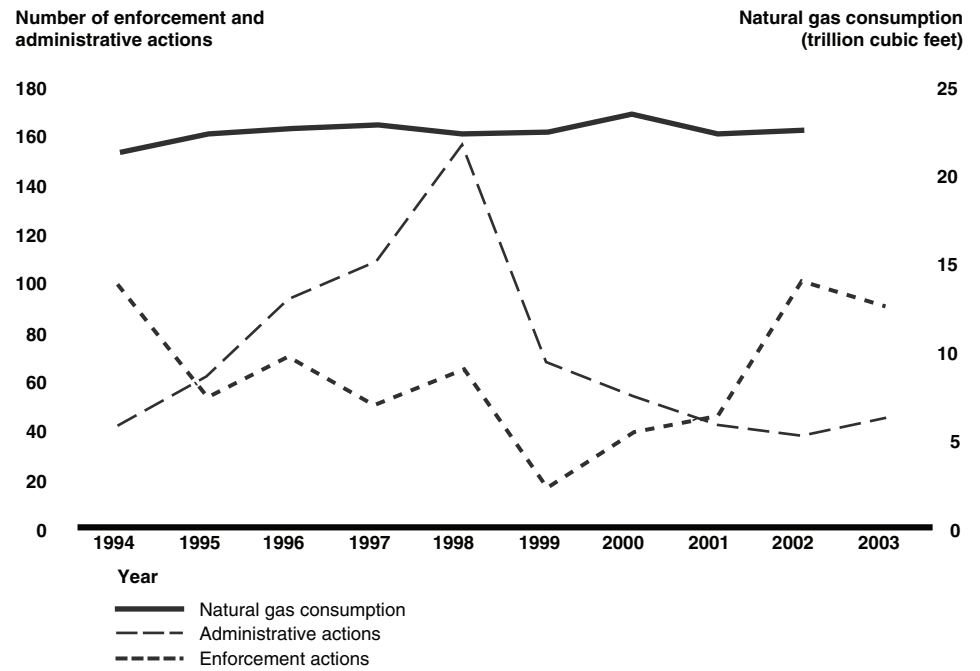
**Appendix IV  
OPS's Enforcement Policies Influenced  
Trends in Enforcement and Administrative  
Actions**

**Natural Gas and Petroleum  
Consumption**

Trends in natural gas and petroleum consumption do not appear to be associated with trends in OPS's enforcement and administrative actions. From 1994 through 2002 (latest data available), natural gas consumption increased by 5.7 percent, rising from about 21.2 trillion cubic feet to almost 22.5 trillion cubic feet. (See fig. 15.) This trend is not consistent with the fluctuations in OPS's enforcement and administrative actions.



**Figure 15: OPS's Enforcement and Administrative Actions and Natural Gas Consumption, 1994 through 2003**

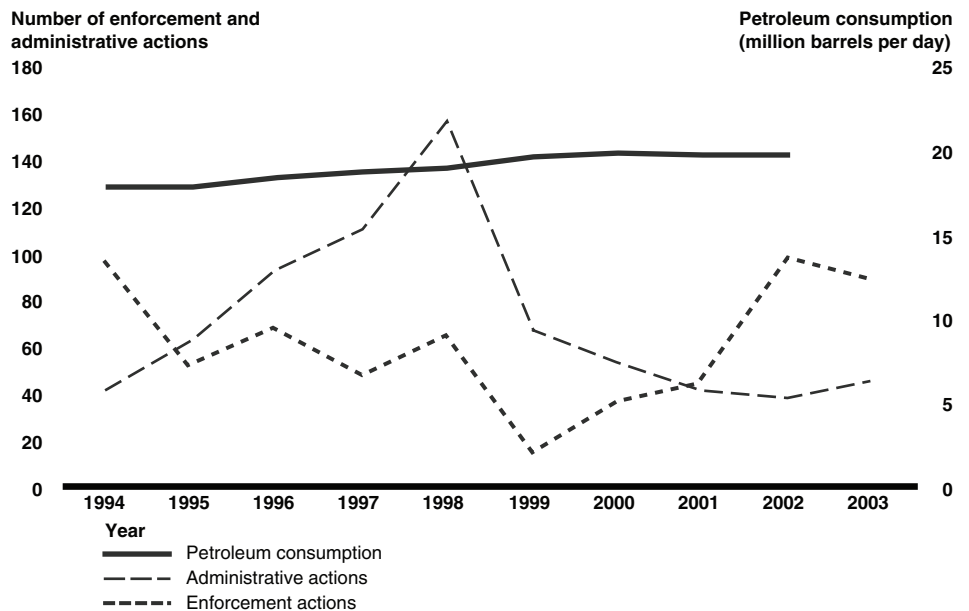


Source: GAO analysis of OPS, FAA, and Energy Information Administration data.

**Appendix IV**  
**OPS's Enforcement Policies Influenced**  
**Trends in Enforcement and Administrative**  
**Actions**

Petroleum consumption also increased, rising by almost 11 percent at a fairly steady rate, from almost 18 million barrels per day in 1994 to more than 19 million barrels per day through 2002 (latest data available). Over the same period, the number of enforcement and administrative actions that OPS issued varied widely. (See fig. 16.)

**Figure 16: OPS's Enforcement and Administrative Actions and Petroleum Consumption, 1994 through 2003**



Source: GAO analysis of OPS, FAA, and Energy Information Administration data.

**Construction Spending**

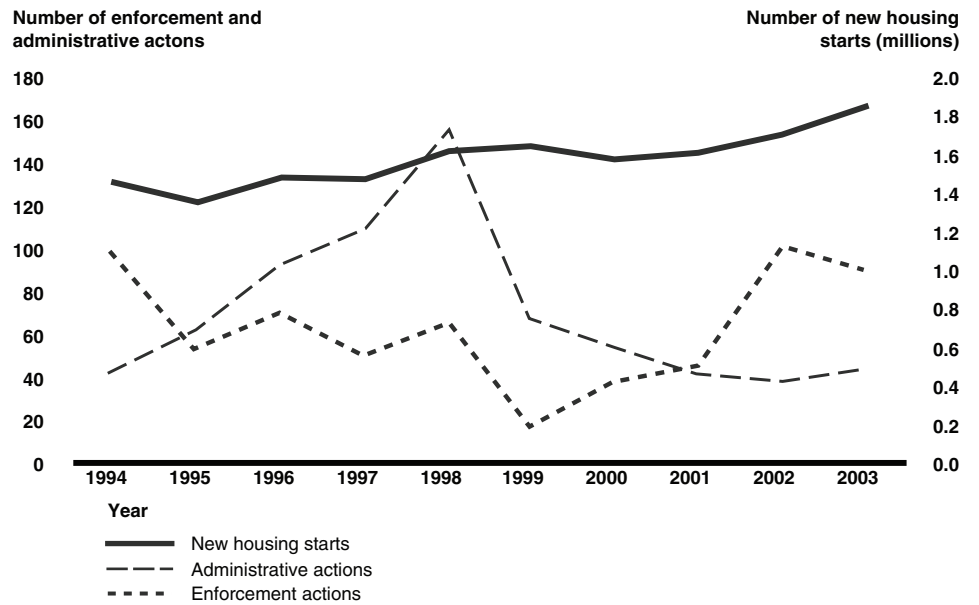
Historical trends in new construction do not appear to be associated with trends in OPS's enforcement and administrative actions. Pipeline accidents often result from construction activities, such as excavation. From 1994 through 2003, new construction steadily increased, as measured by Census Bureau indicators of privately owned housing units started and completed. For example, the number of new, privately owned housing units started increased by almost 27 percent at a fairly steady rate, from about 1.5 million in 1994 to about 1.8 million in 2003. However, trends in OPS's enforcement and administrative actions varied widely over the same



**Appendix IV  
 OPS's Enforcement Policies Influenced  
 Trends in Enforcement and Administrative  
 Actions**

period.<sup>2</sup> In particular, the trend in the number of OPS's enforcement actions does not appear to be associated with the trend in the number of new homes started. (See fig. 17.)

**Figure 17: OPS's Enforcement and Administrative Actions and New Privately Owned Housing Units Started, 1994 through 2003**



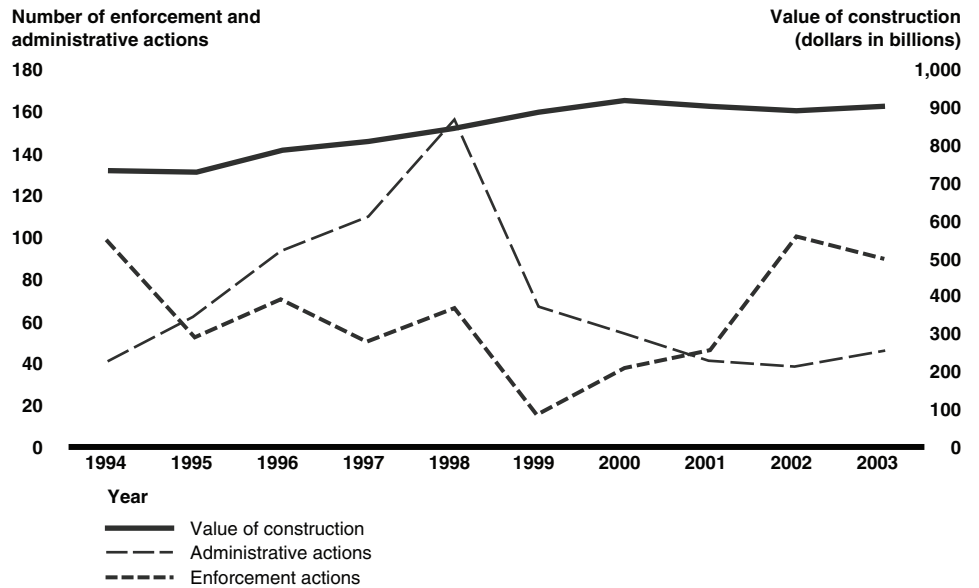
Source: GAO analysis of OPS and FAA data and presentation of Census Bureau data.

<sup>2</sup>We wanted to compare trends in OPS's enforcement and administrative actions with historical trends in population growth for both suburbs and inner cities. However, Census population data at this level of geographic detail were not available for the period covered by our review.

**Appendix IV**  
**OPS's Enforcement Policies Influenced**  
**Trends in Enforcement and Administrative**  
**Actions**

Similarly, the value of new homes completed does not appear to be associated with trends in OPS's enforcement activity. (See fig. 18.) From 1994 through 2003, in constant dollars, the annual value of construction put in place increased steadily by almost 23 percent, from about \$732 billion in 1994 to about \$898 billion in 2003. Over the same period, the number of OPS's enforcement and administrative actions fluctuated widely.

**Figure 18: OPS's Enforcement and Administrative Actions and the Total Value of Construction Put in Place, 1994 through 2003**



Source: GAO analysis of OPS and FAA data and presentation of Census Bureau data.

Note: Census construction value data are for public and private construction, published monthly, in constant (2003) dollars.

# Contacts and Staff Acknowledgments

---

---

## Contacts

Katherine Siggerud, (202) 512-2834  
James Ratzenberger, (202) 512-2834

---

## Staff Acknowledgments

In addition to the above, Jennifer Clayborne, Elizabeth Eisenstadt, Bert Japikse, Judy Guilliams-Tapia, Bonnie Pignatiello Leer, Gail Marnik, and Gregory Wilmoth made key contributions to this report.

---

## GAO's Mission

The Government Accountability Office, the audit, evaluation and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

---

## Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's Web site ([www.gao.gov](http://www.gao.gov)). Each weekday, GAO posts newly released reports, testimony, and correspondence on its Web site. To have GAO e-mail you a list of newly posted products every afternoon, go to [www.gao.gov](http://www.gao.gov) and select "Subscribe to Updates."

---

## Order by Mail or Phone

The first copy of each printed report is free. Additional copies are \$2 each. A check or money order should be made out to the Superintendent of Documents. GAO also accepts VISA and Mastercard. Orders for 100 or more copies mailed to a single address are discounted 25 percent. Orders should be sent to:

U.S. Government Accountability Office  
441 G Street NW, Room LM  
Washington, D.C. 20548

To order by Phone: Voice: (202) 512-6000  
TDD: (202) 512-2537  
Fax: (202) 512-6061

---

## To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: [www.gao.gov/fraudnet/fraudnet.htm](http://www.gao.gov/fraudnet/fraudnet.htm)

E-mail: [fraudnet@gao.gov](mailto:fraudnet@gao.gov)

Automated answering system: (800) 424-5454 or (202) 512-7470

---

## Congressional Relations

Gloria Jarmon, Managing Director, [JarmonG@gao.gov](mailto:JarmonG@gao.gov) (202) 512-4400  
U.S. Government Accountability Office, 441 G Street NW, Room 7125  
Washington, D.C. 20548

---

## Public Affairs

Jeff Nelligan, Managing Director, [NelliganJ@gao.gov](mailto:NelliganJ@gao.gov) (202) 512-4800  
U.S. Government Accountability Office, 441 G Street NW, Room 7149  
Washington, D.C. 20548

---

**United States  
Government Accountability Office  
Washington, D.C. 20548-0001**

**Presorted Standard  
Postage & Fees Paid  
GAO  
Permit No. GI00**

**Official Business  
Penalty for Private Use \$300**

**Address Service Requested**

---

