

GAO

Fact Sheet for the Honorable
Bruce F. Vento
House of Representatives

September 1986

PIPELINE SAFETY

Actions Taken to Improve the Program



131456

RESTRICTED—Not to be released outside the General Accounting Office except on the basis of specific approval by the Office of Congressional Relations.

RELEASED



United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-214352

September 30, 1986

The Honorable Bruce F. Vento
House of Representatives

Dear Mr. Vento:

In your August 5, 1986, letter and during discussions with your office, you asked us to obtain information about the Department of Transportation's pipeline safety responsibilities. Specifically, you asked us to

- provide information on what actions the Department's Research and Special Programs Administration (RSPA) has taken in response to our prior pipeline safety report (Need to Assess Federal Role in Regulating and Enforcing Pipeline Safety, GAO/RCED-84-102, July 10, 1984),
- discuss problems with RSPA's pipeline safety data systems which we previously identified, and
- summarize the results of the RSPA's inspection of Williams Pipeline Company (Williams) since 1980.

DEPARTMENT ACTIONS IN RESPONSE TO OUR REPORT

In our 1984 report we recommended that the Department (1) develop and present alternatives to redefine the federal role and responsibilities for assuring the safety of intrastate pipelines, (2) enhance the inspection coverage of pipeline operators under federal jurisdiction, (3) improve state agency inspection activity reporting and RSPA monitoring of state agency programs, and (4) gather and analyze data necessary to determine if additional regulations are warranted and, if so, take appropriate action.

The Department told us it has addressed all but one of the recommendations in our July 1984 report. (See

Section 1 for a complete discussion of our recommendations and the Department's actions.) The only recommendation that remains under review within the Department relates to redefining the federal role and responsibilities for assuring the safety of intrastate pipelines. In 1984, we concluded that the Department did not have adequate inspection coverage of the interstate and intrastate pipeline operators for which it was responsible. A major reason was that the Department did not have the resources needed to inspect these systems. In addition, since state participation in the program is voluntary, the Department cannot require the states to maintain an adequate level of inspection activity, assume responsibility for additional intrastate pipelines, or correct deficiencies in their programs.

Since we issued our report, the number of the Department's pipeline inspectors has remained about the same--17 inspectors in 1983 and 18 inspectors as of August 1986.

RSPA'S IMPROVEMENTS TO ITS DATA SYSTEM

As part of its pipeline safety responsibilities the Department collects data from pipeline operators that are subject to federal regulations. The purpose of the data system is to provide factual information that will give the Department a statistical base with which to define safety problems, determine their underlying causes, and propose regulatory solutions.

In our April 16, 1985, testimony, we pointed out problems in the data system.¹ (See Section 2 for a complete discussion of our findings.) Specifically, we found that numerous source documents, which are prepared by the pipeline operators, contained obviously inaccurate data that were not corrected before being entered into the system.

¹Testimony was before the Subcommittee on Fossil and Synthetic Fuels, Committee on Energy and Commerce, House of Representatives on GAO's views of selected aspects of the Department of Transportation's pipeline safety program.

Also, data have not been entered into the system in a timely manner. As of February 1985, none of the gas annual reports for 1983 (due March 1984) or gas incident reports from June 1984 to February 1985 had been entered.

According to an RSPA official responsible for pipeline data systems, RSPA has taken steps to address the problems we identified in our testimony. For example, RSPA has initiated controls over the entry of data to improve its accuracy, and through use of a microcomputer, is entering data into the system as it is received.

INSPECTIONS OF WILLIAMS

RSPA inspects pipeline operators under its jurisdiction to determine compliance with Federal Pipeline Safety Regulations. Depending on the inspection results, RSPA can (1) conclude that no enforcement action is warranted, (2) issue a warning letter that identifies noncompliance with the regulations (usually involving minor violations), or (3) if the violations are serious, issue orders to the operator to correct the problems, which could include stopping operations and/or assessing a fine.

Between April 1980 and August 1986, RSPA conducted 20 inspections of Williams. For 6 of the 20 inspections, RSPA required no enforcement action. For 12 of the inspections, RSPA issued notices of probable violations. In 4 of these 12 cases, RSPA issued warning letters to correct identified problems; Williams has corrected the problems and those cases are closed. Final orders were issued in 4 of the 12 cases and Williams corrected the violations and paid a \$1,000 fine on one of them. Williams provided additional data for one of the 12, and RSPA determined that the violation had not occurred and withdrew its proposed order. The 3 remaining of the 12 cases have not been resolved.² For 2 of the 20 inspections, RSPA has not determined what action, if any, is warranted. (See Section 3 for a detailed discussion of the 20 inspections.)

²This includes the July 8, 1986, pipeline accident.

- - - - -

We obtained information for this fact sheet from discussions with RSPA officials and its inspection files on Williams Pipeline Company. We discussed the information in this fact sheet with RSPA officials and incorporated their comments where appropriate.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this fact sheet until 30 days from its publication date. At that time, we will provide copies to the Department and make copies available to others upon request. If you have any further questions on these matters, please contact me on 275-7783.

Sincerely yours,



Herbert R. McLure
Associate Director

C o n t e n t s

SECTION		<u>Page</u>
1	STATUS OF RECOMMENDATIONS, AND AGENCY COMMENTS AND ACTIONS TAKEN FROM OUR PRIOR REPORT	6
2	THE ACCURACY OF TIMELINESS OF THE PIPELINE SAFETY DATA SYSTEM	10
3	INSPECTION RESULTS OF THE WILLIAMS PIPELINE COMPANY SINCE 1980	13

ABBREVIATIONS

GAO	General Accounting Office
RSPA	Research and Special Programs Administration

SECTION 1

STATUS OF RECOMMENDATIONS, AND AGENCY COMMENTS AND ACTIONS TAKEN FROM OUR PRIOR REPORT

In August 1986, the Department provided us the following information on the status of the actions it has taken in response to our recommendations.

RECOMMENDATION

We recommended that the Secretary of Transportation direct the Administrator, RSPA, to develop and present to the congressional oversight and appropriations committees, alternatives to redefine the federal role and responsibilities for assuring the safety of intrastate pipelines, including the hazardous liquids pipelines. These alternatives were to propose different combinations of responsibilities for intrastate operators not currently under a state's jurisdiction as well as defining the federal responsibility for assessing state agency programs. We recommended that each alternative proposed should include (1) the role and responsibility of both the Department and the state agencies, (2) a discussion of the safety risks associated with the alternatives, and (3) the identification of any legislative changes associated with each alternative. We also recommended that each of the alternatives presented should include (1) estimates of the staffing and funding levels RSPA and the states would need to carry out those functions which would be their responsibility and (2) analysis of the impact each alternative would have on inspection activity.

Agency comments and actions taken

The Department agreed with this recommendation; it has in process a study of the federal and state pipeline safety roles. A Department official responsible for the study told us the study will

- discuss financial alternatives to maintain or obtain state participation in the program;
- analyze the impact of each alternative on inspection activity and provide information on general staffing and funding needs, including possible ways of funding each alternative (e.g., user fees); and
- identify any needed legislation changes.

Because the study has not been completed, we are not able to provide specific comments at this time. However, we believe that the study, if carried out as described by Department officials, has the potential to identify program alternatives.

RECOMMENDATION

Acknowledging the Department's limited pipeline inspection resources, we believed inspection coverage of the pipeline operators under federal jurisdiction could be enhanced. Thus, we recommended that the Secretary of Transportation direct the Administrator, RSPA, to take the following measures:

- Evaluate and, if the benefits of having pipeline operators establish a quality assurance program outweigh the cost, implement a mandatory quality assurance program for interstate pipeline operators.
- Complete and update its inspection workload inventory by dividing all interstate gas and liquid operators into common inspection units, and include the master meter and liquefied petroleum gas operators that are under its jurisdiction.
- Require its regions to expand and refine the inspection workload and activity data inventory they maintain, and report to headquarters for each category of operator the number of inspection units subject to inspection and the number of units that have been inspected one or more times during the year, and a breakout of the number of inspections performed by type of inspection.

Agency comments and actions taken

RSPA told us they conducted a study which showed that the use of a mandatory quality assurance program for interstate pipeline operators would not be cost-beneficial and therefore decided not to establish one. The Department indicated its regional offices have divided operators' systems into inspection units, and the Department has also asked states to divide their operators' systems into units. They also told us that master meter and liquefied petroleum gas operators will be included in the Department's overall review of the program. The Department informed us that the monthly report from the regions to headquarters was revised in January 1986 to include inspection data.

RECOMMENDATION

Our report recommended that the Secretary of Transportation direct the Administrator, RSPA, to improve state agency inspection activity reporting and its monitoring of state agency pipeline safety programs by

- using more performance-oriented measures to evaluate state agency actions in enforcing federal pipeline safety standards, which would include revising the monitoring form to eliminate irrelevant questions, redesigning other questions to provide more meaningful data, and developing

additional questions to evaluate state program performance;

- providing the regional offices with additional guidance to assure consistent interpretations of the questions on the monitoring form;
- updating criteria used to determine the minimum level of state inspection activity or establishing new criteria for this purpose;
- clarifying instructions provided for data collection and reporting by state agencies, particularly for data on inspection days, operators inspected, noncompliances, and enforcement actions; and
- having the regional offices (1) review and advise headquarters as to the probable accuracy of the program activity data at the time the state agencies submit such data and (2) devote more time to verifying the accuracy of these data during their annual monitoring visits.

Our report also recommended that the Secretary of Transportation direct the Administrator, RSPA, to better define state inspector qualifications and training requirements and assist the states in obtaining the needed inspector training by

- identifying what knowledge and skills are necessary to conduct effective inspections of operators;
- determining what training the states' inspection workforce needs to conduct effective inspections; and
- working with the states to determine the most efficient and effective way for all state inspectors to obtain the identified training needs within a reasonable time period.

Agency comments and actions taken

The Department stated that RSPA (1) has redesigned the state monitoring form being used to monitor state programs beginning with calendar year 1984; (2) has provided regional offices with guidance to assure consistent evaluations of program adequacy during monitoring; (3) reviewed and updated criteria for the minimum level of state inspection activity; (4) issued new instructions to states for data collection relating to inspection days, operators inspected, noncompliances, and enforcement actions; and (5) is having the regional offices verify the accuracy of state program activity data during their state monitoring visits.

The Department stated that it is describing the qualifications that a state inspector should possess to each

state agency during annual monitoring visits and during annual meetings with state agency staff.

The Department stated that RSPA generally requires state pipeline safety inspectors to attend pipeline safety training within 3 years from when they start their employment as inspectors.

RECOMMENDATIONS

Our report recommended that the Secretary instruct the Administrator, RSPA, to

- gather and analyze the data necessary to determine whether there are sufficient hazards, which could lead to personal injury or environmental damage, to warrant regulation of rural gas gathering lines, gas service lines, hazardous liquids storage facilities, and substances transported in liquefied form that are not presently regulated and
- take appropriate actions to amend the regulations and, in the case of rural gas gathering lines and/or gas service lines, propose the legislation needed to provide coverage of those additional pipeline facilities that warrant coverage.

Agency comments and actions taken

The Department published a study of regulated and nonregulated storage facility accident data and concluded that changes to its regulations would not be cost-beneficial. In addition, in its opinion, unregulated gas service lines do not warrant inclusion under its present regulations. Further, the Department will not be proposing amendments to the Natural Gas Pipeline Safety Act to include rural gas gathering lines because it does not believe that these lines represent a safety hazard to the public. However, the Department will fund studies to establish whether (1) highly volatile liquid pipelines present a higher safety risk warranting additional regulations and (2) there are other hazardous liquids which should be included under the regulations.

SECTION 2

THE ACCURACY AND TIMELINESS OF THE PIPELINE SAFETY DATA SYSTEM

As part of its pipeline safety responsibilities the Department collects data from those pipeline operators that are subject to federal regulations. The purpose of the data system is to provide factual information that will give the Department a statistical base with which to define safety problems, determine their underlying causes, and propose regulatory solutions. The major users of the system are Bureau headquarters and regional staff and state inspectors. The following information was included in our April 1985 testimony relating to pipeline safety data.

ACCURACY OF DATA

We found that pipeline operators prepared numerous source documents with obviously inaccurate data. These were not corrected before being entered into the system. For example, our review of 3,260 reports submitted by pipeline operators showed that 392 (12 percent) contained obvious addition errors for the total number of miles of pipelines the operators were reporting, and that none were corrected before entry into the system.

In reviewing portions of the reported data, we identified instances of duplicate data in the system. For example, our analysis of 844 operator reports identified 10 that had been entered into the data system more than once. Because of missing data, we could not determine the full extent of such duplication.

Bureau officials responsible for the data system agreed that the system contained errors and duplications. We were unable to determine, however, what effect, if any, inaccurate data has on the pipeline safety program. Bureau officials believed that a new data reporting form that operators had been using since June 1984 could potentially improve accuracy. However, the change in the reporting forms did not preclude the problems of duplicate reports. We concluded that to correct this problem, controls were needed at the time of data entry.

TIMELINESS OF DATA

Data have not been entered into the system as soon as they should have been. The Department's standards provide that data should be entered into the system within 2 weeks after they are received from the pipeline operators.

We found, however, that as of February 1985, none of the gas annual reports for 1983 (due March 1984) or gas incident reports from June 1984 to February 1985 had been entered into the system. We could not determine all the reasons why not, but according to a Department official responsible for the system, part of the problem may have been caused by changes in the reporting

requirements. These changes required a new series of computer programs to edit, store, and retrieve data before it could be entered. Although the Department had a contractor responsible for making system changes, as of February 1985 they had not been made. Therefore the data had not been entered into the system.

DATA INTEGRATION

The pipeline data system also lacks ability to integrate data from several sources. The overall data system consisted of six separate systems that used data from different sources. If the systems were integrated, the data would be more useful to the system users.

In a 1978 report (Pipeline Safety--Need for a Stronger Federal Effort, CED-78-99, Apr. 26, 1978), we recommended that operator inspection and compliance data be combined with data from the operators' annual reports and incident reports in order to provide a rational basis for conducting inspections and assessing penalties. As of February 1985, however, the RSPA had not carried out this recommendation because it did not believe significant benefits could be achieved.

We discussed with pipeline officials in four states, however, the advantages in combining data from the various system components. They said that they would like to have annual and incident pipeline safety data integrated as well as enforcement data. Integrating data, they said, would enable them to compare enforcement actions in other states.

In order to determine the feasibility of integrating the systems and the costs associated with it, we combined the gas incident systems with two other gas data systems. Putting these four computer files together for 1983 data was fairly straightforward and inexpensive--about \$60 in computer costs. We provided the results of this effort to the Bureau for its consideration.

AGENCY ACTION

To improve the accuracy of its data, RSPA has begun verifying computations and eliminating duplicate reports. Also, RSPA is sending pipeline reports to its regional and state agency officials to verify their accuracy. Further, an RSPA official told us that by using a microcomputer to enter the data, RSPA has begun to speed up data entry. For example, the operators' 1985 annual reports, due to RSPA by March 1986, were being entered into a microcomputer beginning in January 1986 as they were received. The report data was then placed in a temporary file on the main computer for validation and in July 1986 the temporary file records were transferred into the permanent computer file. However, RSPA told us that some pipeline operator reports are still late, which in turn makes RSPA reports late.

The same RSPA official told us that the data integration problem was more complex. RSPA has developed a plan to improve data integration from different systems. A major objective of the plan is to enhance the enforcement activities of the federal and state inspectors.

SECTION 3

INSPECTION RESULTS OF THE
WILLIAMS PIPELINE COMPANY SINCE 1980

<u>Date of Inspection</u>	<u>Type of Inspection</u>	<u>City and State</u>	<u>Finding and Status</u>
<u>NO ENFORCEMENT ACTION</u>			
June 11-12, 1980	Routine Inspection	Tulsa, Okla.	No violations found.
Sept. 4-5, 1980	Routine Inspection	Eau Claire, Wis.	No violations found.
Sept. 27, 1980	Witness a Test	Osceola, Ia.	No violations found.
Dec. 6-7, 1982	Routine Inspection	Jasper, Mo.	No violations found.
Aug. 20-22, 1984	Witness a Test	Minneapolis, Minn.	No violations found.
July 11, 1985	Accident Investigation	Kansas City, Kan.	No violations found.
<u>WARNING LETTERS</u>			
May 20, 1980	Routine Inspection	Kansas City, Kan. to Wyandott County, Kan.	Pipeline route was not marked with warning signs. Letter issued June 26, 1980. Case closed.
Apr. 16-17, 1980	Accident Investigation	Roseville, Minn.	Used pump placed in service without pre-testing. Letter issued December 21, 1981. Case closed.
Nov. 7-8, 1982	Routine Inspection	Various Locations	Protective covering needed for pipe exposed to atmosphere. Letter issued January 28, 1983. Case closed.

<u>Date of Inspection</u>	<u>Type of Inspection</u>	<u>City and State</u>	<u>Finding and Status</u>
Feb. 15, 1983	Accident Investigation	Owatona, Minn.	Lack of operating procedures concerning pressure. During resolution, two follow-up inspections were made on April 25-28, 1983, and December 12-13, 1983. Letter issued on March 8, 1984. Case closed.

PROBABLE VIOLATIONS OR PROPOSED ORDERS

May 4-5, 1981	Routine Inspection	Roseville, Minn.	Installation of terminal manifold without 100 percent testing. Compliance order issued September 21, 1981. Test performed. Case closed.
Oct. 31, 1981	Accident Investigation	Superior, Wis.	Operator failed to report a rupture that resulted in a spill of 2,249 barrels (92,000 gallons) of gasoline. On March 16, 1982 a civil penalty of \$1,000 was assessed. Fine collected March 24, 1982. Case closed.
Jan. 13-15, 1982	Accident Investigation	Maplewood, Minn.	Proposed hazard order issued March 24, 1982. During resolution, seven follow-up inspections were made on January 19-22, 1982, February 18-19, 1982, March 8-11, 1982, March 29, 1982, May 17-21, 1982, June 10-11, 1982, and October 17-18, 1984. Operator and RSPA agreed that the operator would recondition the pipeline. Order issued July 6, 1982. Order amended September 23, 1982. Case closed.

<u>Date of Inspection</u>	<u>Type of Inspection</u>	<u>City and State</u>	<u>Finding and Status</u>
Mar. 17, 1983	Accident Investigation	Indianola, Ia.	Operator was unintentionally operating above maximum pressure. During resolution, a follow-up inspection was made on June 6-7, 1983. Compliance order issued April 16, 1984. Order amended February 10, 1986. Case closed.
Nov. 30, 1984	Accident Investigation	Shawnee Mission, Kan.	Probable violation of over-pressure. Hearing held December 10, 1985. Operator presented new data. Case withdrawn July 28, 1986. Case closed.
Feb. 2, 1985	Accident Investigation	Shawnee Mission, Kan.	Failure of pipe seam. Notice of probable hazardous condition issued October 18, 1985. Hearing held December 10, 1985. Action pending.
July 8, 1986	Accident Investigation	Mounds View, Minn.	Hazardous facility order issued July 11, 1986. Operator to develop operational reliability analysis. Action in progress.
July 17, 1986	Accident Investigation	Afton, Minn.	Failure of pipe seam. Notice of probable hazardous condition issued August 12, 1986. Action pending.

UNRESOLVED INSPECTIONS

Jan. 22, 1986	Accident Investigation	Kansas City, Kan.	The inspection results have not been resolved.
May 19-20, 1986	Routine Inspection	Sioux Falls, S.D.	The inspection results have not been resolved.

(340581)



Requests for copies of GAO reports should be sent to:

U.S. General Accounting Office
Post Office Box 6015
Gaithersburg, Maryland 20877

Telephone 202-275-6241

The first five copies of each report are free. Additional copies are \$2.00 each.

There is a 25% discount on orders for 100 or more copies mailed to a single address.

Orders must be prepaid by cash or by check or money order made out to the Superintendent of Documents.

United States
General Accounting Office
Washington, D.C. 20548

Official Business
Penalty for Private Use \$300

Address Correction Requested

First-Class Mail
Postage & Fees Paid
GAO
Permit No. G100