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AUTHORIZATIONS FOR THE NATURAL GAS PIPELINE SAFETY ACT

GOVERNMENT

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HEARING

BEFORE THE

SUBCOMMITTEE FOR CONSUMERS

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

UNITED STATES SENATE

NINETY-FIFTH CONGRESS

SECOND SESSION

ON

S. 1895

TO AMEND THE NATURAL GAS PIPELINE SAFETY ACT OF 1968
TO AUTHORIZE APPROPRIATIONS FOR FISCAL YEAR 1979

FEBRUARY 27, 1978

Serial No. 95-130

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THE PAPER

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AUTHORIZATIONS FOR THE NATURAL GAS PIPELINE SAFETY ACT

MONDAY, FEBRUARY 27, 1978

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
SUBCOMMITTEE FOR CONSUMERS,
Washington, D.C.

The subcommittee met at 9 a.m., in room 5110, Dirksen Senate Office Building, Hon. Wendell H. Ford (chairman of the subcommittee) presiding.

OPENING STATEMENT BY SENATOR FORD

Senator FORD. Good morning, ladies and gentlemen.

This morning the committee will consider S. 1895, a bill to amend the Natural Gas Pipeline Safety Act of 1968 to authorize appropriations for fiscal year 1979.

In the 10 years since this legislation was enacted, we have seen this Nation's growing rate of energy consumption place an additional demand on the use of pipelines as an energy transportation system. Because we are placing ever greater reliance on pipelines to transport those particularly volatile products such as liquefied natural gas, liquefied petroleum, and liquid ammonia, it is essential that the Federal Government do what it can to insure that the safety programs of the gas pipeline industry work effectively.

With the enactment of the Natural Gas Pipeline Safety Act in 1968, Congress clearly intended that the DOT provide national leadership in developing and enforcing stringent pipeline safety standards. Additionally, the legislation contemplates a high degree of State participation in assuring local compliance with these standards.

The gas and liquid pipelines in this country, which cover nearly 2 million miles, carry with them the potential for major catastrophe. Buried deep beneath the ground and running adjacent to schools, public facilities, and other population centers, pipelines present a unique risk to the public health and safety.

Since 1970, we have witnessed a slow but steady rise in the number of failures reported in connection with gas pipeline systems. In 1976, 63 deaths and 366 injuries resulted from 1,500 gas pipeline failure incidents, which were reported to the DOT by gas system operators. Although it is true that in comparison with other forms of transportation, the deaths and injuries associated with gas pipelines are relatively low, the potential for a major disaster is of continuing concern to both Congress, State governments, and the pipeline industry.

There are several important issues that I had hoped to discuss this morning in detail. However, due to our time constraints this morning

the Department can expect to receive an extensive set of supplemental followup questions which will be included in the record.

Among the important issues that are of interest to this Committee as it considers the reauthorization of the Federal Government's gas pipelines safety program are the following:

How has the unique Federal/State partnership in the enforcement of Federal pipeline safety standards been working?

Are sufficient Federal resources being devoted to this effort, and have the States developed the necessary resources to assure compliance with the regulations?

Are regulations being enforced for both interstate and intrastate pipelines?

The Department of Transportation in its recent reorganization has placed the Bureau of Materials Transportation within a new research and special programs directorate. Will the structure of this new directorate place sufficient emphasis on the continued development of the pipeline safety program?

In prior hearings, we have heard testimony about jurisdictional disputes between agencies of the Federal Government concerning the Outer Continental Shelf and other Federal lands. Have these jurisdictional disputes been resolved? In short, are we developing a comprehensive and coordinated Federal approach to pipeline safety?

Additionally, the committee will be interested in learning how the Department has utilized its available resources in fulfilling its responsibilities under the Natural Gas Pipeline Safety Act.

An additional question of interest to this committee is the contribution that has been played by the Technical Pipeline Safety Advisory Committee in assisting the Office of Pipeline Safety. Was the Department well advised in recommending the abolition of this committee?

Perhaps the primary question to be addressed in an authorization hearing of this type is the following: What can Congress do to support a vigorous and ongoing pipeline safety program? I hope the witnesses we will be hearing from this morning will be able to provide the committee with guidance as it considers these important issues.

[The bill follows:]

[S. 1895 95th Cong., 1st sess.]

A BILL To amend the Natural Gas Pipeline Safety Act of 1968 to authorize appropriations for fiscal year 1979

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 15 of the Natural Gas Pipeline Safety Act of 1968 is amended—

(1) in subsection (a) thereof, by striking out “and” after “1977,” and by inserting after “1978,” the following: “and such sums as are necessary for the fiscal year ending September 30, 1979,”; and

(2) in subsection (b) thereof, by striking out “and” after “1977,” and by inserting after “1978” the following: “, and such sums as are necessary for the fiscal year ending September 30, 1979”.

Senator FORD. Our first witness this morning is Paul Rodgers, general counsel of the National Association of Regulatory Utility Commissioners, located here in Washington.

Good morning, Mr. Rodgers. If you have a statement and you want to submit it for the record, briefly read it, or we can take your statement in toto, whichever you prefer.

STATEMENT OF PAUL RODGERS, GENERAL COUNSEL, NATIONAL
ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS, WASH-
INGTON, D.C.; ACCOMPANIED BY ALVINA McHALE

Mr. RODGERS. Thank you very much, Senator.

We will submit it for the record.

I will attempt to summarize this since I realize how valuable the time is.

Senator FORD. The Senate goes into session at 9:45 under the rules of the Senate. We can hold these hearings for no more than 2 hours past that time.

Mr. ROGERS. Yes, sir, I understand.

I am accompanied at the table this morning by Alvina McHale, the NARUC director of congressional relations.

By and large, the NARUC has been very pleased with the operation of the natural gas pipeline safety program. NARUC was very instrumental in the construction of the program, and from our standpoint, we believe the program has been a prototype of Federal-State cooperation in this area. It's a program which permits great State participation, but at the same time the Federal Government has the ultimate determination as to how the program works.

The Federal Government prescribes minimum gas pipeline safety standards. The States can upgrade those standards if they so choose. The Federal Government has the basic responsibility for the interstate pipeline system. However, there is provision for the State commissions even there to act as their agent.

The State commissions must annually certify as to their programs so that DOT can determine their effectiveness, and any State commission that is found not doing a good job will be ousted from the program by the Federal Government. The Government can then assert jurisdiction until such time that the State can show that it's doing or can do an adequate job.

And there's a 50-50 matching funding in the program, and this, in effect, pulls State money into a Federal program.

So, it seems to me that it's an excellent program, and I would think that the main way to strengthen the program is for there to be additional funding in the appropriation process and grants and aid.

Funding in this program has been very modest over the years. It started out the first year with half a million dollars, which was 1971. And in 1978, it's up to \$2.4 million. Of course, this has been extremely modest. We think one of the best ways to improve the program is to increase this funding.

Of course, it would be up to the pipeline safety people to see if this money is well spent, but I think certainly by congressional standards it's been a very strong program.

Now, we are very sorry to see the increase of fatalities. However, I think in any kind of a safety program you get certain swings where you have some abnormal accidents which increase the number of fatalities.

It seems to me that the gas pipeline safety program compares very favorably with other programs, and especially when you compare it with the railroad program.

We're also very concerned, as was mentioned in your opening statement, Senator, about the preservation of the Gas Pipeline Safety Technical Advisory Committee. As you know, the Carter administration very wisely has launched a crusade against advisory committees. We think the advisory committee process frankly has been greatly abused, and there are a great many more advisory committees in existence than need to be.

And, of course, under the Federal advisory committee legislation, this costs the taxpayers a lot of money since participants' expenses are covered.

However, because the process has been abused, it does not mean that all advisory committees should be destroyed. We think an excellent example of one that should be preserved is this Office of Pipeline Safety Advisory Committee.

As you know, everything has to be cost-effective, because the rate payer is paying for increased safety measures. The advantage of having this advisory committee is that it forces the Office of Pipeline Safety to consult with these people. Of course, it's purely advice. It's made up of five Government officials, two of whom must be State commissioners relating to pipeline safety, four industry people, and six public members. So, you see, the makeup of the committee is heavily balanced toward the public sector. The industry only has 4 out of 15.

And we think the advisory committee has been active, and we think it's important that DOT have this input.

So, with that, Senator, I would insert my statement in the record. I'd be pleased to try to answer any questions you may have on State programs.

Senator FORD. You touched on some very sensitive questions. After reading your statement on these issues, several questions come to mind, particularly with respect to the advisory committee.

You stated in your statement in effect, that although the Carter administration has been trying to abolish the so-called advisory committees, this is one we ought to preserve. Could you amplify on this point of view?

Mr. RODGERS. Senator, we've already filed testimony before the committees of jurisdiction. We'll be happy to file this for the record.¹

Senator FORD. Personally, I would like to see the advisory group continue, and hopefully we can arrange that. If you will file that testimony for the record, we will appreciate that very much.

Mr. Rodgers, in your statement, you discussed the high degree of Federal-State cooperation that the Office of Pipeline Safety Operations has abstained. The Natural Gas Pipeline Safety Act of 1968 places the lead role in the area of pipeline safety with the Federal Government. In your opinion, how successful has OPSO been in meeting its leadership responsibilities in this area?

Mr. RODGERS. I think it's been very successful. There has been a full 100-percent participation by all the States. It's very difficult to get 100-percent participation in anything, and I think the Office of Pipeline Safety has done a great job.

Senator FORD. To your knowledge, has OPSO provided any written instructions to the individual States concerning the inspection of interstate pipelines as an agent of the Federal Government?

¹ See p. 10.

Mr. RODGERS. I would presume so. The NARUC suggested this agency relationship, because in the beginning the Office of Pipeline Safety was understaffed. We suggested that they should designate as agents the State commissions who would enact at that point enforcement of the interstate system. I would presume that that would carry with it guidelines for inspection.

Senator FORD. Do all States have the same level of participation in OPSO programs?

Mr. RODGERS. No, sir. There would be a variation. Of course, the larger States in terms of population have the larger number of personnel.

Senator FORD. To your knowledge, what minimum level of proficiency does OPSO require of a State as a condition of obtaining a Federal grant to carry out State pipeline safety programs?

Mr. RODGERS. There, again, that's something else the Office of Pipeline Safety would have. I have here a national table as of 1977 showing the State proportion of all gas pipeline safety programs which I'd be pleased to offer for the record.

Of course, what criteria they use to measure whether a State should be admitted, I'm not aware of.

Senator FORD. Should OPSO specify the particularly noteworthy features of various State programs, to give guidance to States with less productive safety programs?

Mr. RODGERS. Well, yes, I think that is a role that Congress anticipated the Office of Pipeline Safety would perform, because I think it's up to the Office of Pipeline Safety to try to promote the program and to inspire the State commissions to put forth their best effort. And, of course, if the State commission does not do that, it should make an evaluation as to whether or not that State should continue in the program.

Senator FORD. In your statement, you indicated that OPSO State program's staff of three persons are conducting, and I quote: "a model national program that is a success." You go on to say that an expansion of the State program staff would be in order. What additional success do you believe could be achieved by expanding the State program staff?

Mr. RODGERS. Well, it seems to me that there should be more people than what we have to conduct this national program, although we think it worked out very successfully with the very limited amount of Federal personnel and funds devoted to it.

Senator FORD. What additional personnel do you believe are needed?

Mr. RODGERS. I'll let Mrs. McHale respond to that.

Mrs. McHALE. I would say, Senator, it would depend on the appropriations level the Congress is considering. We feel OPSO is doing an adequate job with three. I think with additional appropriations, more would be in order.

Senator FORD. But we want to appropriate sufficient funds to do more than just an adequate job. You say they're doing a fine job with a limited amount of appropriations and staff. What additional staff do you recommend be funded?

Mr. RODGERS. Are you talking about the staff here? Are you talking about the Federal staff?

Senator FORD. Yes.

Mr. RODGERS. Well, I think that would be up to the Office of Pipeline Safety.

Mrs. McHALE. In terms of encouraging additional State participation in terms of getting out and doing the job that has to be done, I think they're thwarted somewhat because they can't be out encouraging State participation. They get involved in a lot of clerical duties because one of the persons is a secretarial position. Only two are professional staff. So, I think they could be doing a better job in terms of the kinds of things that they've done in the last year, cutting down unnecessary reporting requirements by the States, et cetera, if they had more people monitoring the program.

Senator FORD. They have asked for an open ended appropriation. We need dollar figures, if we can get them.

Mr. RODGERS. I agree with that, because it seems to me that the Office of Pipeline Safety should certainly justify the money they want. I think the Congress would be very reluctant to come up with an open appropriation. In fact, I thought the Congress had gotten away from that procedure.

Senator FORD. Well, we had hoped to. But as I understand it, as I read it, they are requesting an open ended appropriation. I don't think they'll get that.

So I'm trying to arrive at dollars, personnel, the need, and do as thorough a job as we can to get the personnel that are necessary in order to carry out an expanded program. If you have any ideas, I'd appreciate you notifying the committee as to the additional personnel that you believe are needed.

How would you compare the need for expanding the State program with the Department's request for eight additional positions related to the Alaska natural gas pipeline system?

Mr. RODGERS. Well, in other words—I'm not too clear on what the question means, Senator.

Senator FORD. Well, I want to understand OPSO's priorities. Do we need eight additional employees just for the Alaska gas pipeline system?

Mr. RODGERS. Well, I would think so, Senator, in view of the sabotage that's being experienced by the oil pipeline.

I assume the eight people are going in there when the gas pipeline gets into operation. But they also have jurisdiction for the oil pipeline.

Senator FORD. They have three for all the rest of the States, and we want eight as it relates to the Alaska Natural Gas Pipeline System.

Do they have an antisabotage program going on?

Mr. RODGERS. Now, what you're talking about, to monitor the distribution system, safety in Alaska—

Senator FORD. The development.

Mr. RODGERS. But you're not talking about eight for this interstate natural gas pipeline that's going to bring the natural gas down from the North Slope to the Lower 48 States? You're talking about that, I take it.

Senator FORD. They have asked for eight positions during the planning stage.

Mr. RODGERS. I don't know why they would need that many positions, not unless the State of Alaska for some reason desires to pull

out of the program. We hope very much that the State of Alaska will not do that. I hope the State of Alaska Public Utilities Commission stays in the program. It seems to me that eight would be excessive.

However, if you're talking about safety personnel for the natural gas pipeline to bring the gas down from Alaska, it seems to me that would be quite a modest request.

Senator FORD. Let me read the request here: Seven professional and one clerical position are requested to monitor the design, construction, and operation of the Alaska Natural Gas Pipeline System during fiscal year 1979.

How does that compare to the importance of the State programs where we only have three employees?

Mrs. McHALE. Senator, we're really just familiar with the State programs division as it pertains to the Office of Pipeline Safety. It's difficult for us to make an analysis based on another part of the Department of Transportation's operations.

It's difficult to make an analysis.

Senator FORD. All right.

You spoke earlier in opposition to abolishing the advisory committee. Could OPSO obtain the outside expertise that you cite and avoid having the regulations "written in a vacuum" simply by obtaining comments on proposed standards and amendments?

Mr. RODGERS. No; in fact, no element of Government, of course should operate in a vacuum, and I think it's a very valuable committee because you have 15 members. All of them are in the final analysis selected by the Office of Pipeline Safety, the DOT, and its five Government, six public, and four from the industry.

And the Office of Pipeline Safety is forced to consult with these people, and we think that's very healthy, because we feel a lot of these people wouldn't provide advice; it is a required consultation.

And I think it's a system that's very important, seeing that our safety programs are consistent with realistic economic assessments. Anything that's mandated, the ratepayers in this country are going to have to pay for, eventually.

So it's a very healthy system, it seems to me, to maintain the advice that exists.

If we don't have an advisory committee, and all you have is a multitude of people filing comments with the Office of Pipeline Safety, which they already do in their safety proceedings, you can never really be assured that they are given adequate consideration.

We think the advisory committee as a primary public concern is a very healthy device to keep in existence.

Senator FORD. How many members does NARUC have on the advisory committee?

Mr. RODGERS. The statute mandates two, and they've been given an extra member out of the public sector. So, in effect, we have 3 out of 15.

Senator FORD. Does NARUC submit formal comments on OPSO's proposed standards and amendments?

Mr. RODGERS. We have not thus far, since it's quite technical. And one of our members has been chairman of our staff subcommittee on gas. And, of course, we depend upon his participation in the committee to in effect make a technical input from the standpoint of State regulations.

Of course, the NARUC could do that if it so chose, but since the committee's work has been so technical, we left it to our members on the committee to take care of that.

Senator FORD. I don't believe I have any further questions.

We do have some information for the record I've asked you to submit. I'd also ask this of you, if you would: If you have any specific recommendations on increasing the State program, we'd like to have that submitted for the record as well.

Mr. RODGERS. Thank you very much.

Senator FORD. Fine. I thank both of you. I appreciate your being here.

[The statement follows:]

STATEMENT OF PAUL ROGERS, GENERAL COUNSEL, THE NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS

Mr. Chairman and members of the committee, my name is Paul Rodgers. I am the Administrative Director and General Counsel of the National Association of Regulatory Utility Commissioners, commonly known as the "NARUC". I have served in this capacity since November 1965. I am accompanied at the witness table by Alvina M. McHale, NARUC director of congressional relations.

The NARUC is a quasi-governmental, nonprofit organization founded in 1889. Within its membership are the governmental agencies of the fifty States and of the District of Columbia, Puerto Rico and the Virgin Islands engaged in the regulation of utilities and carriers. The mission of the NARUC is to improve the quality and effectiveness of public regulation for the benefit of the American consumer.

The members of the NARUC appreciate your invitation to make their views known on S. 1895, a bill to amend the Natural Gas Pipeline Safety Act of 1968 to authorize appropriations for fiscal year 1979.

Mr. Cannon's February 16 letter requesting our testimony on S. 1895 specifically asked us to comment on the Department of Transportation's success in meeting the congressional expectations that led to passage of the Natural Gas Pipeline Safety Act of 1968. As a direct result of persistent efforts by the Office of Pipeline Safety Operations (OPSO), there was 100 percent voluntary State participation in the program both in 1976 and 1977. Forty-seven State jurisdictions received grant-in-aid funds in 1977, up from 43 in 1976.

Overall, I would credit OPSO's State Program Division for an outstanding job in developing and promoting a model Federal/State cooperative program. Rather than discuss in detail OPSO actions over the years that have encouraged State participation, I will highlight three more recent programs.

First, selected State personnel now participate in developing material for technical training courses offered by DOT for State inspectors. This reliance on State personnel and expertise by the State Programs Division further cements the spirit of teamwork and cooperation which already exists in the program between Federal and State personnel.

Secondly, during the last two years, the State Programs Division has conducted successful meetings with State gas safety personnel which provide a State forum for a direct exchange of information about the gas pipeline safety program. As proof that these sessions are not merely exercises in jawboning, most of the State recommendations have been implemented by OPSO.

Thirdly, the State Programs Division recently reviewed all OPSO reporting requirements for State agencies. With an eye toward simplifying and streamlining the collection of program data, the review process succeeded in relieving administrative burdens needlessly imposed upon States.

Surprisingly, the success of the OPSO State program has been achieved by three staff persons—a supervisor, State programs officer, and a secretary. We are confident that these three people are recognized by the Department of Transportation and the Materials Transportation Bureau for the conducting a model national program. As an aside, we understand that new personnel are being added to OPSO offices for regulations, enforcement, and technology. We would expect that an expansion of the State program staff would be in order as well. Further, OPSO representation at NARUC regional and State meetings could be an important plus for continued cooperation between Federal and State program participants.

The level of congressional appropriations for the Pipeline Safety Grant Program began with \$500,000 in fiscal '71 with a high for fiscal '78 of \$2.4 million.

The level of interest by States in the gas pipeline safety program can best be gauged, however, by looking at the dollars and cents invested by the States themselves since 1971. Beginning with an investment of \$2.4 million in 1971, the States more than doubled their investment by 1977. The Department of Transportation reports that total State expenditures approximate \$5 million in 1977 with the sums steadily increasing to an approximate \$8.1 million in 1982.

Last year's DOT budget estimate request referred to the States' effort as "progressive and sustained" and called the efforts "indicative of the States' desire to cooperate with DOT and develop good active State gas safety programs." We couldn't agree more with DOT's analysis.

State participation in gas pipeline safety programs increased in 1977. State agencies joined the Office of Pipeline Safety in sponsoring gas pipeline safety seminars attended by 1439 safety personnel from industry and a considerable number of State agency personnel. Additionally, courses at Oklahoma City's Transportation Safety Institute in the safety evaluation of the pipeline system, gas pipeline failure, and corrosion control were attended by 153 State agency pipeline safety personnel.

As you know, State participation in the Federal gas pipeline safety program is achieved either through the filing of a certification or by entering into an agreement with the Department of Transportation.

In accordance with Section 5(a) of the Act, State agencies certify that they have adopted the Federal safety standards and are enforcing these standards. A State agency may adopt additional or more stringent standards for intrastate gas pipeline systems. In 1977, the number of State agencies participating under Section 5(a) certification was 46, one above the level of participation for 1976.

In accordance with Section 5(a) of the Act, a State agency agrees to undertake certain aspects of a gas pipeline safety program for intrastate facilities, for which the State agency cannot certify under existing State laws. In 1977, seven States participated with the Office of Pipeline Safety under Section 5(b) agreements.

The DOT rightly concludes that one important indicator of an active safety program at the State level is the number of person-years a State devotes to pipeline safety since this figure has a direct correlation with the State's ability to conduct pipeline safety inspections and enforce the Federal safety standards. State agency personnel assigned to gas pipeline safety increased from an estimated 43 person-years during 1967-1968 to an estimated 197 person-years in 1977.

NARUC interest in the Gas Pipeline Safety Program is enhanced by its membership on the Technical Pipeline Safety Standards Committee established by Section 4 of the Natural Gas Pipeline Safety Act of 1968.

The Technical Pipeline Safety Standards Committee reviews all proposed gas pipeline safety standards and amendments to such standards and prepares a report on the technical feasibility, reasonableness, and practicability of each such proposal. The 1968 Act very clearly requires that committee members chosen shall be experienced in safety regulation of gas transportation and pipeline facilities or technically qualified by training and experience in one or more related fields of engineering.

NARUC made its view known last year on S. 2088, a bill proposing the Advisory Committee Termination Act of 1977, since the pipeline safety committee was an advisory committee slated for abolishment by the bill. We defended the committee's fine record over the years, and, we think, established beyond a reasonable doubt that the committee's existence is critical to the success of the Federal-State gas pipeline safety effort.

In testimony prepared for delivery before the Senate Committee on Governmental Affairs, NARUC admitted sharing President Carter's insistence upon streamlining, eliminating waste, and restoring accountability. But, NARUC added that it also believes that Federal regulators continue to benefit from outside expertise. We noted that Federal agency decisions cannot be made nor regulations written in a vacuum. The process requires input from those in the field with the experience to head off potential problems, clarify confusing instruction, and eliminate bureaucratic tie-ups. We would hope that the members of this Senate committee can agree.

In summary, Mr. Chairman, NARUC as an association is satisfied that State participation in Federal pipeline safety operations is an acknowledged and integral part of the effort in large part due to the encouragement by DOT's Office

of Pipeline Safety Operations. We expect State participation's strong growth record of the past to continue in the future with the assist of adequate congressional funding and close monitoring by the authorizing committee.

[The following information was referred to on p. 4:]

STATEMENT OF THE NATIONAL ASSOCIATION OF REGULATORY
UTILITY COMMISSIONERS¹

Mr. Chairman and Members of the Subcommittee:

My name is Paul Rodgers. I am the Administrative Director and General Counsel of the National Association of Regulatory Utility Commissioners, commonly known as the "NARUC". I have served in such capacity since November 1, 1965.

The NARUC is a quasi-governmental, nonprofit organization founded in 1889. Within its membership are the governmental agencies of the fifty States and of the District of Columbia, Puerto Rico and the Virgin Islands engaged in the regulation of utilities and carriers. The mission of the NARUC is to improve the quality and effectiveness of public regulation for the benefit of the American consumer.

The members of the NARUC appreciate your invitation to make their views known on S. 2088, a bill proposing the Advisory Committee Termination Act of 1977. The NARUC's interest is restricted to one of the advisory committees proposed for abolishment by the bill—the Technical Pipeline Safety Standards Committee established by Section 4 of the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C., Sec. 1673).

The Federal safety standards to be promulgated under the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C., Sec. 1671, *et seq.*) were ordered to be established not later than 24 months after August 12, 1968 and, thereafter, as deemed necessary by the Secretary of Transportation. That statute notes that the standards may apply to the design, installation, inspection, testing, construction, extension, operation, replacement and maintenance of pipeline facilities. The statute directs that any State agency may adopt such additional or more stringent standards for pipeline facilities and the transportation of gas not subject to Federal Power Commission jurisdiction and not incompatible with the Federal minimum standards.

The Technical Pipeline Safety Standards Committee reviews all proposed gas pipeline safety standards and amendments to such standards and prepares a report on the technical feasibility, reasonableness, and practicability of each such proposal. The Committee is composed of 15 members: five selected from Federal, State or local government agencies, four from the natural gas industry, and six from the general public. Two of the five government representatives are State commissioners selected after consultation with the NARUC. The legislation very clearly requires that the members chosen shall be experienced in safety regulation of gas transportation and pipeline facilities or technically qualified by training and experience in one or more related fields of engineering.

According to a White House Memorandum of February 25, 1977, to the heads of executive departments and agencies, many existing advisory committees "have outlived their usefulness, or are not providing truly balanced advice and recommendations." The memorandum set out criteria by which advisory committees should be judged. Exceptions would be made for committees for which a compelling need exists, which have truly balanced membership, and which conduct their business as openly as possible consistent with the law and their mandate.

It is my intention to describe the record of the Technical Pipeline Safety Standards Committee and establish beyond a reasonable doubt that the Committee's existence is crucial to the success of the Federal-State gas pipeline safety effort. This Committee, one of a number of committees established by statute that are slated for termination, is not an excuse for spending taxpayer money or getting a free ride to Washington, D.C. for Committee members. It is a working team of acknowledged safety experts in the transportation of gas and operation of pipeline facilities.

Attached as an appendix is the list of meeting dates of the Technical Pipeline Safety Standards Committee.

¹ Statement made before the U.S. Senate Committee on Governmental Affairs Subcommittee on Reports, Accounting, and Management.

Predictably, 1969 was the busiest year for the Committee. The first meeting on January 30 involved a discussion of the proposed system for collecting and analyzing gas pipeline operation data, including system failures. The broad parameters of the Office of Pipeline Safety were noted: investigate system failures; research causes of failure; define safety procedures; act as a clearinghouse for safety information; establish minimum safety standards for construction, maintenance, and operation of gas pipeline facilities; and prescribe tests and analyze procedures to check the level of performance.

The January 30 Committee report clearly noted Committee reliance on NARUC participation:

"We shall seek the active participation of State agencies and the National Association of Regulatory Utility Commissioners in a cooperative safety program. We appreciate their concern with local problems. We respect their experience in the promotion of safety in their state programs and hope to have the benefit of that experience in the development of a national program."

Advice was solicited at the April 29 and 30, 1969, Washington, D.C. Committee meetings about the proposed system for collecting information about pipeline failures. NARUC joined three other organizations to provide backup material for the discussion. Committee input was requested on the question of developing regulations on a piecemeal basis rather than waiting to publish complete revisions.

By the July 29, 1969 meeting, Committee involvement in the particulars of the gas pipeline safety effort began to surface. The Committee received a report on the contract with Mechanics Research, Inc. to study the causes and control of corrosion. The Committee reviewed proposed regulations for pipeline failures, full-scale experimental procedures, and girth welding quality. The Committee discussed methods of making data from failure reports available to the public and individuals. Committee recommendations were also made on the kind of study needed on pipeline valves and flow control.

Since minimum Federal standards for transmission of gas and pipeline facilities would be published August 12, 1970, the Committee acted on the proposed standards at the October 2 and 3, 1969 meetings in Washington, D.C. The Committee record reflects that based on existing State regulations, NARUC-member suggestions, and the contributions of others, certain regulations affecting gas transmission and pipeline facilities were strengthened.

The Acting Director of the Office of Pipeline Safety (OPS) asked the Committee for final recommendations on proposed national gas pipeline leak reporting forms and associated reporting procedures. The meeting to consider these recommendations was held October 29, 1969.

Following an American Gas Association Symposium on pipeline research in Dallas, Texas, the Committee met in that city on November 20. The first official Committee report was filed December 19, 1969, outlining the balloting results on the Office of Pipeline Safety reporting requirements.

Minimum Federal pipeline safety standards had to be finalized by August 12, 1970. The Committee met June 23, 24, and 25, for an information discussion of the standards. A July 22 and 23 follow-up meeting included a formal review process and Committee recommendations on minimum Federal pipeline standards. An August 10 Committee report noted material changes in the technical content of several proposals. The same report suggested that the Office of Pipeline Safety and the Committee had their work cut out for them. The report concluded that the majority of the Committee members thought that "much work remains to be accomplished in future rulemaking to expand and clarify the rules to further improve the safety of pipeline facilities."

A November 20, 1970, Committee meeting included three agenda items: amending several miscellaneous regulations, discussing proposed amendments for odorization of gas, and suggesting areas needing investigation by the Office of Pipeline Safety.

A November 1970 Committee report is evidence of the Committee's technical expertise. Committee recommendations were not limited to approvals or disapprovals. Word and paragraph additions were suggested; typographical errors which changed the sense of the regulations were noted; errors in fact were caught. A proposed regulation pertaining to 49 CFR, Sec. 192.191(b) referred to "alpha buta styrene (ABS)", for example. The Committee correctly changed the reference to "acrylonitrile butadiene styrene (ABS)."

The April 13 and 14, 1971, Committee meetings zeroed in on corrosion control requirements in Subpart I of the Part 192 standards. The question of State versus

Federal gas regulations centered on a discussion of the New York Public Service Commission regulations and the Department of Transportation regulations. The Committee weighed whether the differences between the two approaches were major and if major, whether the Office of Pipeline Safety should consider a proposed rulemaking to work out the differences.

The June 20 and 21, 1972 Committee meetings concentrated on reporting on the technical feasibility, reasonableness, and practicability of certain amendments to regulations. Informal comments were solicited on notices of proposed rulemaking affecting line marking standards, revision of bending limitations on steel pipes, and requirements for odorization of gas in transmission pipelines.

During the October 30 and 31, 1974, meetings, five items put to a ballot test were approved as technically feasible, reasonable, and practicable. Negative votes were cast by some, however, and certain modifications were recommended, several of which were later accepted.

The November 19 and 20, 1975 meeting concentrated on Part 192 minimum Federal safety standards for the transportation of natural and other gas by pipeline. The Committee recommended adding a new section about protecting cast-iron pipelines and suggested revisions to the existing section on cast iron pipes. Further, the Committee proposed changes to procedures to minimize the hazard associated with a gas pipeline emergency (49 CFR, Sec. 192.615). The Committee-supported changes were later approved.

The 1975 Committee meetings also focused on the need for instituting rule-making proceedings to work out a redefinition of technical terms relating to construction requirements for transmission lines and mains.

The March 1976 meeting clearly exhibited no slackening of interest or enthusiasm on the part of the Committee members. In all, 26 Committee votes were taken. Committee approval votes included unanimous opinions as well as positive opinions with dissenting votes.

The Committee rejected certain Office of Pipeline Safety recommendations, suggested a rulemaking proceeding with respect to monitoring cathodic protection systems, and opposed an Office of Pipeline Safety proposal to revise Section 192.707 pending receipt and review of the contract study on pipeline facility safety practices. The Committee said certain changes to Section 192.707 might be acceptable if language clarifying the applicability of effective dates were added.

In 1977, the Committee ruled on the technical feasibility, reasonableness, and practicability of regulations affecting the design of plastic pipelines (Sec. 192.121), the marking of pipeline materials (Sec. 192.63), and the design limitations for plastic pipe [Sec. 192.123(b)(2)]. The Committee further highlighted problems associated with the mixed usage of the symbol "S" in Part 192 and voted to designate "long-term hydrostatic strength" in Section 192.121 as a substitute for the symbol "S". The Committee then considered the merits of an Office of Pipeline Safety proposal to introduce a new Subpart to Part 192 which prescribes minimum requirements for converting steel pipelines from service not subject to this Part to service that is subject to this Part.

The Committee discussed and unanimously adopted means for carrying out the stated objectives and procedures for implementing regulatory reform policy (41 Fed. Reg., p. 16200). The Committee's comments and recommendations were informally reviewed by the Materials Transportation Bureau and considered in planning future rulemaking actions.

The latest Committee session also looked at the Office of Pipeline Safety's list of rulemaking priorities. The Committee members added for OPS's consideration items they thought worthy of attention.

An August 22, 1977, Memorandum from President Carter to the heads of executive agencies and departments commended them for their part in his effort to "make the government more effective and efficient." The NARUC shares President Carter's insistence upon streamlining, eliminating waste, and restoring accountability. But, the NARUC likewise believes that Federal regulators continue to benefit from outside expertise. Federal agency decisions cannot be made nor regulations written in a vacuum. The process requires input from those in the field with the experience to head off potential problems, clarify confusing instruction, and eliminate government "gobbledygook."

In NARUC's estimation, the record of the Technical Pipeline Safety Standards Committee is a strong one. The Committee's strength is the fact that it provides a forum as well as an informal sounding board to bounce off ideas about critically important Federal safety standards for pipeline facilities and gas transportation. The Committee is not and never has been a passive receptacle for Federal

notions about standard-setting. The Committee is an aggressive representative of Federal and State governments, the natural gas industry, and the general public. The costs incurred by the Committee are minimal and the benefits quite apparent.

The track record of the gas pipeline safety program in general is proof that a partnership of Federal-State interests can work. In 1976, 100 percent State participation in the program was achieved. While 1971 State expenditures for gas pipeline safety activities totaled approximately \$2.4 million, the dollar amount jumped to \$4.1 million in 1976. States estimate that 1981 commitments will approach \$7 million. Similarly, the States project steady increases in the number of person-years devoted to pipeline safety. Since 1967, the number has increased more than 400 percent.

The creation of the Technical Pipeline Safety Standards Committee was an integral part of the Natural Gas Pipeline Safety Act of 1968. The success of the gas pipeline safety effort, however, in no way justifies the elimination of the Technical Pipeline Safety Standards Committee. In NARUC's estimation, the Committee is symbolic of the program's Federal-State partnership. The Committee provides a forum where experts from both sides can head off program disruptions, resolve existing or potential conflicts, and bring their practical knowledge to bear on otherwise theoretical discussions.

NARUC applauds the intention of the President to cut the budget by eliminating wasteful advisory committees, but we respectfully submit that withdrawing support from the Technical Pipeline Safety Standards Committee could seriously jeopardize a model program of Federal-State cooperation.

Accordingly, we respectfully urge you to work for the preservation of the Technical Pipeline Safety Standards Committee.

Thank you for your attention.

APPENDIX

MEETING DATES OF THE TECHNICAL PIPELINE SAFETY STANDARDS COMMITTEE

1969—January 30, April 29 and 30, July 29, October 2 and 3, October 29, and November 20.

1970—June 23, 24, and 25, July 22 and 23, November 20.

1971—April 13 and 14.

1972—June 20 and 21.

1973—None.

1974—October 30 and 31.

1975—November 19 and 20.

1976—March 30 and 31, December 16 and 17.

1977—June 7 and 8.

Senator FORD. The next witness is Henry Eschwege, the Director of Community and Economic Development of the U.S. General Accounting Office. Henry, you may proceed, and if you want to submit your statement for the record, we'll accept that, or you can present it in toto, whichever pleases you.

STATEMENT OF HENRY ESCHWEGE, DIRECTOR, COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION, GENERAL ACCOUNTING OFFICE; ACCOMPANIED BY JERRY KILLIAN, ASSISTANT DIRECTOR; AND BOB SEELINGER

Mr. ESCHWEGE. Mr. Chairman, it will take me about 15 minutes to read it. I could read portions of it, maybe, if that's agreeable to you.

Senator FORD. Fifteen minutes is fine.

Mr. ESCHWEGE. May I introduce my colleagues.

Senator FORD. Please do.

Mr. ESCHWEGE. On my left is Jerry Killian, Assistant Director of our Division; on my right is Bob Seelinger who worked on our particular review—which is still ongoing—of the Federal pipeline safety program.

We had hoped before we come out with our report that we would get the Department's formal comments.

Senator FORD. Let me ask you, when can we expect the report?

Mr. ESCHWEGE. About May.

Senator FORD. About May?

Mr. ESCHWEGE. Yes, sir.

Gas and hazardous liquid pipelines in the United States total about 1.7 million and transport more than one-half of the Nation's energy supply.

These pipelines carry large quantities of extremely volatile substances, often under high pressure, and expose large segments of the population to potentially catastrophic incidents.

Annually, there are hundreds of thousands of pipeline leaks, most of which are discovered and repaired before major incidents can occur.

Unfortunately, a number of these leaks do result annually in about 50 deaths and 350 serious injuries.

Considering the many miles of pipelines, these statistics indicate that pipeline transportation is relatively safe.

Nevertheless, with the many individual systems of diverse size, age, materials, and overall quality, as well as the several thousand operators of varying capabilities, there is a very real and continuous concern over the catastrophic potential of the flammable and explosive materials which move through the system.

In addition to the primary concern for public safety, pipeline accidents and leaks also result in the loss of valuable energy resources and environmental pollution.

Although adequate statistics on the extent of such losses are not available, a number of sources indicate that leaks have resulted in substantial losses.

The Office of Pipeline Safety Operations is an element of the Materials Transportation Bureau within the DOT. It is responsible for developing and administering a comprehensive and effective pipeline safety program.

The Office has a budget of \$4.78 million to carry out its responsibilities in fiscal year 1978. Its basic authority, which covers essentially all gas and hazardous liquids transported by pipeline, is provided primarily by the so-called Transportation of Explosives Act, the Natural Gas Pipeline Safety Act of 1968, and title I of the Transportation Safety Act of 1974.

The Pipeline Safety Office's effectiveness in carrying out its mandated responsibilities has been adversely affected by certain weaknesses in its program.

The regulations issued by the Pipeline Safety Office do not cover all pipeline facilities, and in some cases are not effective for insuring the public safety.

Although several serious accidents have occurred in recent years involving intrastate liquid pipelines and gas gathering lines in rural areas, safety regulations governing these pipelines have not been issued.

Also, exemptions which may not be in the best public interest are provided in the existing regulations for certain types of pipeline systems.

Small petroleum gas systems, for example, are exempted from Federal safety jurisdiction on the basis of the number of customers they

serve without regard for the number of people who may be exposed to their potential hazards.

Certain existing pipeline safety regulations also should be strengthened to provide effective protection to the public.

One area in need of priority attention involves liquefied natural gas facilities. Standards developed by the National Fire Protection Association were incorporated into the Federal Gas Pipeline Safety Regulations in 1972 as an interim measure pending development of comprehensive Federal standards. Despite widespread concerns as to the inadequacy of these standards and despite the increasing use made of this potentially hazardous commodity, comprehensive Federal standards for liquefied natural gas facilities have not been issued.

Although the Office has been slow in acting, it is currently taking the initial steps toward promulgating such standards. Unless standards are promptly developed, the large number of LNG facilities currently being constructed or planned will progress to a point where needed safety provisions cannot be reasonably incorporated into their design or construction.

Priority attention also needs to be given to the transportation of highly volatile liquids, such as liquefied petroleum gas and anhydrous ammonia. Although these liquids are much more hazardous than other liquids, Federal safety regulations do not distinguish among the various liquid commodities by requiring higher levels of safety for the more hazardous ones.

From 1968 through 1976 these highly volatile liquids accounted for only 10 percent of the liquid pipeline accidents, but were responsible for 65 percent of the deaths, 56 percent of the injuries, and 32 percent of the property damage. Despite the disproportionate casualties and damage attributed to these liquids, and despite repeated recommendations by the National Transportation Safety Board, more stringent pipeline safety standards have not been issued.

Regulations governing liquid pipelines are generally much less comprehensive and exacting than the gas regulations and, as a result, do not offer the same degree of protection from potential hazards.

For example, although both sets of regulations require operators to establish written emergency procedures, only the gas regulations are specific as to what these procedures must cover and what steps are necessary to insure that emergency situations are properly handled.

Further, the gas regulations require more stringent safety standards for pipelines located in more densely populated areas. The liquid regulations do not.

Although the Pipeline Safety Office has, over the years, responded to National Transportation Safety Board recommendations by stating that it planned a general revision and update of the liquid regulations, this has not been done.

In addition, there are many other areas where pipeline safety officials believe that the regulations should be changed so as to better assure the public safety or to eliminate unnecessary burdens upon the industry.

There has not been, however, a systematic review of the regulations to address such concerns.

The issuance of safety standards do not by themselves increase the level of public safety. Operator compliance with the standards is needed.

The Pipeline Safety Office determines compliance through the inspection of pipeline operators, and takes enforcement action against operators who are not in compliance with the standards.

The inspections usually take 2 days—1 day for checking records, and 1 day for facility inspections. Such inspections do not provide an adequate basis for judging a company's operations. One top field official said that a good compliance inspection would take at least a week.

Guidance given to Federal pipeline field staff does not provide specific criteria of what constitutes an adequate inspection. In addition, guidance on how to allocate staff resources needs revision. The allocation needs to give greater weight to the pipeline systems with the greatest safety problems, as demonstrated by statistics on safety standards violations and leak and casualty data.

The guidance given to the field staff listed certain regulations which were to be emphasized during inspections. However, emphasis was given to regulations which are easiest to enforce, rather than regulations which—if not complied with—pose the greatest safety hazards.

Also, using selected data received from the operators, criteria were developed to enable Federal pipeline field staff to give priority attention to those pipeline operations which present the greatest safety risk.

Unfortunately, the data used to rank the operators was incomplete and inaccurate. In addition, the criteria themselves were questionable. The field staff noted that often there was little correlation between operator rankings and actual operator performance, as evidenced by their inspections.

A vigorous, well-publicized program of meaningful actions against those operators who do not comply is essential in encouraging compliance. Little emphasis has been placed, however, on the use of punitive measures against operators found to be in violation of the established standards.

Instead, emphasis has been on obtaining voluntary operator compliance. Only where operators fail to initiate corrective actions, or simply promise to do so, are penalties normally considered.

From the inception of the Pipeline Safety Office in 1968 through 1977, only 14 assessments had been settled through penalty collections totaling \$12,250. In addition, when the operators inform the office of what actions have been taken or were planned to correct deficiencies noted, the office accepts those responses without verification.

This policy, combined with the basic weaknesses in the inspection program, appears to provide little incentive for operator compliance.

Both Federal pipeline field staff and State officials believe that stricter enforcement would encourage greater operator compliance.

A number of factors have limited the Federal Pipeline Office's ability to enforce its safety program. These include: A small field staff; lack of positive guidance in preparing noncompliance cases; lack of civil penalty authority against liquid pipeline operators; the unique problems of small operators; and the general impreciseness of the safety regulations.

The Natural Gas Pipeline Safety Act of 1968 permits States to assume responsibility for enforcing the safety standards for intrastate gas pipelines, and provides for State assistance in the enforcement of the safety standards for interstate pipelines.

Although all States participate in the Federal program, none of the States have accepted responsibility for all types of gas pipeline operations. The States have a major enforcement role, however, because 2,300 of the 2,600 gas pipeline operators are under State jurisdiction.

During 1977, the States received \$2.3 million in Federal grants to assist them in carrying out this role. Some of the State programs have been inadequate and ineffective.

The Pipeline Safety Office needs to provide guidance to the State agencies on what constitutes an adequate inspection and enforcement program. Inspection and enforcement procedures, among the 12 States we reviewed, differed greatly in areas such as the content and depth of inspections, use of checklists and written inspection reports, and the notification and followup with operators who violate safety standards.

Although most States can assess penalties against operators who violate safety standards, none of the States we reviewed have done so. Instead, they sought voluntary compliance with the pipeline safety requirements.

The act requires the Federal Pipeline Safety Office to annually approve State participation in the gas safety program, and to insure enforcement of Federal safety standards. If the office determines that enforcement is not adequate, it may refuse to certify the State and assert Federal jurisdiction over the gas safety program.

However, the office has never established minimum criteria relating to program quality to qualify a State for certification. Some States may have inadequate programs but continue to participate in the Federal program. Unless criteria are established and enforced, the office cannot be assured that the public is adequately protected.

Where the public is not adequately protected and the Pipeline Office does not believe improvements are likely to occur, it should evaluate the need to assert Federal jurisdiction over pipelines in those States.

There are a number of other pipeline safety issues which, although they represent actual or potential safety problems, have not received adequate attention. For example, one area that has received little attention from the Pipeline Safety Office is the compliance inspection of the many thousands of master meter operators who provide gas through their own lines to facilities such as apartment complexes and trailer parks.

Many of the operators may not be aware of the Federal safety regulations. In the 22 States which have not assumed jurisdiction over such operators, the Pipeline Safety Office is responsible for operator inspections and enforcement of safety standards. However, it is not monitoring these operators.

Another example of an issue in need of greater attention is the damage to pipelines caused by outside forces such as construction equipment. Such damage represents the major cause of serious pipeline leaks. Although the office has long been aware of the seriousness of this problem, it has not, until recently, conducted a study to comprehensively define the problem and seek solutions to it.

Using the results of the study together with input from other sources, the office should take an active role in developing and promoting effective solutions to this problem.

The Pipeline Safety Office has accumulated a great deal of data, but has made only limited use of it in conducting its program. The data has not been used to systematically identify problems needing priority attention, or to identify safety trends in pipeline operations.

Such analyses could be useful in identifying weaknesses in existing regulations, problem operators who might need greater attention, or priority regulations which need to be emphasized during inspections.

The usefulness of the current data system is limited, however, by the absence of certain data essential to an effective data system, and by inaccuracies in the present data base.

In light of the size of the nationwide pipeline system and the importance of the Pipeline Safety Office's role in developing and enforcing an effective program, it is important that the office make the best use of its resources.

A comprehensive and accurate data collection and analysis system can be an important tool for doing this.

The office's effectiveness in developing and enforcing a comprehensive pipeline safety program has been hampered by staffing problems. The office has had a permanent director during only 3 of the 10 years that the pipeline safety program has been in the Department of Transportation.

This raises serious questions as to the priority given to the program, as well as how effective an acting director can be in making difficult or controversial decisions.

Historically, the office has operated with a small staff. In fiscal year 1977, it had 26 professional and 14 clerical positions. I might point out that, of those 40 positions, 6 were unfilled as of December 1976.

In 1978, there was an increase in authorized staff to 52, but the last time we checked only 37 were on board.

Having a small staff—

Senator FORD. When was the last time you checked?

Mr. ESCHWEGE. Pardon?

Senator FORD. When was the last time you checked?

Mr. ESCHWEGE. Last week.

Senator FORD. Last week?

Mr. ESCHWEGE. Yes.

Having a small staff appears to have impacted most of the workload of the five regional offices which are charged with insuring operator compliance with the safety standards.

Each regional office is staffed by two professionals and a secretary, who must monitor: The gas pipeline safety programs conducted by the States with jurisdiction over about 2,300 operators; about 300 gas pipeline operators not subject to State jurisdiction; and about 125 liquid pipeline operators.

The staffing, particularly of the regional offices, is not adequate for carrying out the mandated responsibilities in a comprehensive, effective, and timely manner.

Mr. Chairman, this concludes my statement. We will be pleased to respond to your questions.

Senator FORD. You did mean, in the last paragraph of your statement, where you said: "* * * of the five regional offices which are charged with insuring operator compliance," the five offices are required to oversee 2,300 operators, 300 gas pipeline—rather than each regional office?

Mr. ESCHWEGE. In total; yes, sir.

Senator FORD. Mr. Eschwege, in your view, what areas should get priority attention in the pipeline regulatory program?

Mr. ESCHWEGE. I would like to see, first of all, the State participation strengthened as much as possible. And in order to do that—at least temporarily—the Office of Pipeline Safety needs to devote further effort to providing the necessary guidance so that the State efforts can be strengthened. And eventually, I think the Office might be able to then work its way out of some of the compliance activities that it now is engaged in because States have not fully taken up the program.

Senator FORD. Should there be more than three employees in the State program office?

Mr. ESCHWEGE. Yes; we have a feeling that there probably should be more at this time.

Senator FORD. You said your report would be ready about the first of May, but we need some information for this hearing record. I would like to ask you, and I know you will if you can, to submit for the record, in the next 2 weeks, a brief discussion of the pipeline safety problems that should receive priority attention.

Mr. ESCHWEGE. We'll be glad to do that.

[The following information was subsequently received for the record:]

PIPELINE SAFETY ISSUES IN NEED OF PRIORITY ATTENTION FEDERAL PIPELINE SAFETY REGULATIONS

Problem A.—Existing pipeline safety regulations do not cover all hazardous material pipelines.

Regulations have not been issued for intrastate liquid pipelines or for gas gathering lines in rural areas. In addition, certain pipeline systems (including small petroleum gas systems, interplant facilities, and pipelines operated at relatively low stress levels) have been exempted from Federal safety regulation.

Safety officials, noting the hazardous commodities carried and the serious accidents which have occurred on unregulated pipelines, have recommended that all pipelines involving the public safety be subject to safety regulation.

Action needed.—Extend the Federal pipeline safety regulations over all hazardous material pipelines which pose potential hazards to the public safety.

Problem B.—Improved Federal standards for liquefied natural gas (LNG) facilities are needed.

Standards developed by the National Fire Protection Association were incorporated into the Federal regulations in 1972 only as an interim measure pending development of comprehensive Federal Standards. Despite widespread concerns as to the inadequacy of these interim standards, improved Federal standards have not yet been issued.

Because of the seriousness of the potential hazards associated with LNG and because of the large number of LNG facilities being constructed or expected to be constructed in the near future, the absence of comprehensive Federal safety standards in this area has become an issue of national concern.

In April 1977, as a first step in the formal rulemaking process, OPSO published an Advance Notice of Proposed Rulemaking regarding the development of Federal safety standards for LNG facilities.

Action needed.—Promptly develop and issue improved standards for liquefied natural gas facilities before the large number of such facilities currently being constructed or planned progress to a point where needed safety provisions cannot be reasonably incorporated into their design or construction.

Problem C.—Stronger pipeline safety standards are needed for highly volatile liquids.

Certain of the hazardous liquids such as liquefied petroleum gas and anhydrous ammonia are much more hazardous than others because of their high volatility. Federal pipeline safety regulations do not require higher levels of safety for the more hazardous ones.

From 1968 through 1976 these highly volatile liquids accounted for only 10 percent of the reportable liquid pipeline accidents but were responsible for 65 percent of the deaths, 66 percent of the injuries, and 32 percent of the property damage.

Action needed.—Give prompt attention to the development and issuance of stronger standards for the pipeline transportation of highly volatile liquids.

Problem D.—Regulations governing the transportation of hazardous liquids by pipeline are less comprehensive and exacting than the gas regulations.

The liquid safety regulations do not provide the same degree of protection from potential pipeline hazards as the gas regulations.

NTSB, in recommendations dating back to 1971, have pointed out the need to upgrade and clarify the liquid pipeline regulations and, where appropriate, to make them similar to requirements contained in the gas pipeline regulations. Similar recommendations have been received from OPSO field personnel.

Action needed.—Undertake a general revision and update of the liquid pipeline safety regulations so that they better assure the public safety.

Problem E.—Since they were first adopted, there has not been a systematic review of the pipeline safety regulations to assure that they continue to be effective or that needed revisions are being made.

A major problem with the existing regulations, both for those required to comply with them as well as for those required to determine compliance, is that they do not always establish the definitive and objective criteria necessary to clearly convey their intent or to guide operators in conducting safe pipeline operations.

Discussions with pipeline safety officials and reviews of available documentation indicate that there are many areas where the regulations may need to be strengthened or changed so as to better assure the public safety.

Action needed.—Undertake a systematic and thorough review of the pipeline safety regulations to identify and address existing problems and weaknesses in them.

STATE PIPELINE SAFETY PROGRAMS

Problem A.—State pipeline safety agencies have not been provided specific guidance as to what constitutes an adequate inspection and enforcement program.

With jurisdiction over approximately 2,300 of the 2,600 gas pipeline operators, the States have a major role in the enforcement of the gas pipeline safety regulations.

Major differences exist in the overall quality of State programs.

State inspection and enforcement procedures differ greatly as to what areas are inspected, the extent of inspections, the use of checklists and written inspection reports, and the notification and followup of operators who violate safety standards.

Action needed.—OPSO needs to expedite its current efforts to develop guidance for the States in conducting effective gas pipeline safety programs.

Problem B.—There is no minimum program quality in the gas pipeline safety program.

OPSO must annually approve State participation in the Federal program, and has the authority to refuse to certify a State agency for participation and to assert Federal jurisdiction over the gas safety program in that State.

Although some States appear to have inadequate programs, no certification has ever been rejected.

Action needed.—OPSO needs to establish and use minimum program quality criteria for certification of State programs. Where State programs do not meet the established criteria, OPSO should consider the need to assert Federal jurisdiction over those programs.

FEDERAL COMPLIANCE EFFORTS

Problem A.—OPSO's inspection of operators does not ensure that potential pipeline hazards are being adequately addressed.

Operator inspections are of short duration and limited coverage and do not provide an adequate basis for judging the overall safety of an operator's system.

Emphasis has not been given to intrastate systems (either jurisdictional to OPSO or to the States) where the greatest safety problems exist.

Priority safety standards based on pipeline failure data have not been designated for emphasis during operator compliance inspections.

Field experience with the system developed for selecting operators for inspection indicates that it does not accurately reflect the relative safety performance of the operators.

Action needed.—Conduct more thorough operator compliance inspections and ensure that particular emphasis is given to identified priority problem areas and operators.

Problem B.—OPSO has not conducted an active enforcement program against operators found in violation of the Federal pipeline safety standards.

An active program of meaningful punitive measures against those who do not comply with established safety standards is essential for encouraging compliance.

Since inception of the program in 1968 through 1977, only 14 violation cases have been settled through civil penalty collections, totaling \$12,250. No criminal actions have been brought against pipeline operators and no injunctive actions have been taken.

Emphasis has been upon obtaining voluntary corrective action after operators are notified of violations. This policy, together with the basic weaknesses in OPSO's inspection program, is not effective in encouraging operator compliance.

Action needed.—Conduct a more active enforcement program against those operators who do not comply with the pipeline safety standards. Attention also should be given to selectively verifying corrective actions and addressing factors (including the absence of civil penalty authority against liquid pipeline operators) which adversely affect enforcement efforts.

PIPELINE SAFETY DATA SYSTEM

Problem A.—Although a great deal of pipeline safety data has been accumulated, OPSO has made only limited use of it in conducting its program.

Good data analysis is an invaluable tool for identifying safety problems, determining their underlying causes, and developing satisfactory solutions to them.

A program of systematic data analysis would allow OPSO to effectively and efficiently allocating its resources to priority problem areas and provide it with more rational support for its regulatory and compliance programs.

Action needed.—Develop a program of systematic and comprehensive analysis of the data collected and utilize this information in conducting the Federal pipeline safety program.

Problem B.—The usefulness of the current data system is limited by the absence of certain essential data as well as by inaccuracies in the existing data base.

Valuable statistical information on all pipeline systems and serious leaks which occur on these systems is not required to be submitted. The most notable exceptions include: (1) the absence of detailed information concerning serious pipeline leaks occurring on the many small and medium size gas distribution systems (those with 100,000 or fewer customers); and (2) the absence of annual reports from liquid pipeline operators.

The efficiency and effectiveness of the Federal pipeline safety program could be improved by incorporating into the data system selected program management information. For example, inclusion of past operator inspection and compliance data, combined with the data available from the operators' annual reports and individual leak reports, could provide OPSO with a rational basis for conducting operator inspections and assessing penalties.

Inaccuracies in the data base are the result of incomplete or inaccurate operator reports, ambiguities in the reporting requirements and definitions, and errors in data processing.

Action needed.—Develop a more comprehensive and accurate data system which will include information on all pipeline systems and serious leaks as well as related program management information.

STAFFING RESOURCES

Problem A.—The Federal pipeline safety program has had a permanent director during only 3 of its 10 years.

The present acting director has held that position since July 1975.

Such a situation is not conducive to effective and timely decisionmaking and raises serious questions as to the priority given the pipeline safety program by the Department.

Action needed.—The expeditious appointment of a permanent OPSO director.

Problem B.—The small size of OPSO's staff has adversely affected its ability to deal with its mandated responsibilities in a comprehensive, effective, and timely manner.

OPSO has an authorized staffing level of 52 with 37 persons currently on-board.

Considering the magnitude and growth in its responsibilities in recent years and the impact of the Federal pipeline safety program on the public safety, serious attention needs to be given to OPSO's present and future staffing requirements.

The small staff appears to have its greatest impact on OPSO's regulatory and regional office programs where serious problems and weaknesses continue to exist.

Action needed.—OPSO needs to undertake a thorough review of its mandated responsibilities and the adequacy of its current and programmed staffing levels and allocations to carry out these responsibilities in a comprehensive, effective, and timely manner. Immediate attention should be given to filling those authorized positions which are currently vacant.

Senator FORD. I would like for you to include both gas and liquid pipeline problems in the order of their importance, in your opinion, to public safety.

Mr. ESCHWEGE. If I might just add here: We have in mind two possible legislative changes which could assist the Office of Pipeline Safety in carrying out its responsibilities. We haven't gotten to the point where we can say they are finalized, but I might just throw them out.

One is in the liquids area, where they do not now have the authority to impose civil penalties; provision of such authority would strengthen their efforts in this area.

Senator FORD. You mean you can break a rule or regulation and there's no penalty?

Mr. ESCHWEGE. There are criminal penalties.

Senator FORD. But they're not being used.

Mr. ESCHWEGE. It takes a lot more evidence to pursue a criminal case than it does a civil penalty case.

The other area also involves the liquids. It might be possible to delegate some of the office's functions in this area to those States with proven records in the gas program. These States could carry out some of the liquid pipeline surveillance and compliance activities for the Office of Pipeline Safety.

Senator FORD. Late last week a railroad tank car full of propane exploded in a small town in Tennessee. Was it Waverly?

Mr. ESCHWEGE. Waverly, yes.

Senator FORD. Killing 10 people and seriously injuring dozens more. This is the same product as the liquid petroleum gas that is transported by pipeline, is it not?

Mr. ESCHWEGE. Yes, sir; it's propane.

Senator FORD. Can LPG or propane do as much damage when it escapes from a pipeline as when it escapes from a tank car or tank trucks?

Mr. ESCHWEGE. It can, yes.

Senator FORD. During your review did you determine whether the technical staff at DOT was aware that LPG regulations were not as good as the natural gas regulations?

Mr. ESCHWEGE. Yes, they are aware.

Senator FORD. If they are aware, did they provide any explanation as to why the LPG regulations had not been improved? Did you explore that area at all?

Mr. SEELINGER. Mr. Chairman, since accident reports were first required in 1968, the office has been aware of the problem. There's been many recommendations by NTSB for more stringent regulations. It's a matter of just getting to them.

I understand they are currently working on developing more stringent standards for the highly volatile liquids.

Senator FORD. Do you have any idea when they expect to have those regulations?

Mr. SEELINGER. The last thing I heard was that the office hoped to publish a notice of proposed rulemaking within a couple of months. After analyzing comments on these proposed rules, final rules will then be issued.

Senator FORD. The last thing you heard? When did you hear it last?

Mr. SEELINGER. It was last week.

Senator FORD. Last week? This reminds me of an IG inspection, you know? Everything happens just before a hearing.

Mr. ESCHWEGE. Mr. Chairman, I might just mention that back in May 1973 we issued a report on our concerns on inspection and enforcement of regulations involving the transportation of hazardous materials, and we are currently involved in a review which does not just deal with hazardous materials but with the safety of railroad tracks and railroads in general.

It's a continuing problem.

Senator FORD. Did you review the NFPA standard that has been adopted as a Federal regulation for LNG?

Mr. ESCHWEGE. Our office has done some work on LNG. I wasn't personally involved with it. I'm sure they have reviewed those standards.

Senator FORD. Did you find that the regulation was adequate or inadequate as a Federal regulation for large LNG facilities?

Mr. ESCHWEGE. On pipeline, you mean?

Senator FORD. Pipelines.

Mr. ESCHWEGE. As we pointed out, there are widespread concerns as to their inadequacy, and the office is currently in the process of developing more effective standards.

Senator FORD. Lets look at the issue of exemptions for 1 minute.

The small petroleum gas systems are still subject to State and local regulation even though they are exempt from Federal regulations. Are these small systems, that may have characteristics that reflect local ways of doing things, better left to local regulation by the State or municipality?

Mr. SEELINGER. Sir, I don't believe that in all cases they do come under State regulations. In many cases they do. This is not true in all cases.

And as we've seen, some of the States do not have adequate pipeline safety programs. So, even if the States do have regulatory responsibility over these small pipeline systems, they aren't necessarily monitored.

Senator FORD. Are there any other exemptions that you feel are not in the public interest? What exemptions do you believe are not in the public interest?

Mr. SEELINGER. There are certain areas, specific types of pipelines—those operated below certain stress levels, those between refineries and terminals, those between production facilities and trunklines—which are exempt from Federal regulation.

Senator FORD. You talk about certain pipelines under certain conditions. You know, that's like a certain horse in a certain race is going to win or lose.

What are certain pipelines under certain condition?

Mr. SEELINGER. They are those mentioned pipelines which, although they carry hazardous materials, are not considered to be serious threats to the public safety.

Senator FORD. What's the experience been with those exemptions?

Mr. SEELINGER. To date, I don't believe there's been much of a problem, sir. However, since they carry hazardous materials, sometimes through public areas, they represent potential hazards. There have been accidents on the small LP gas systems.

Senator FORD. As with the small gas systems, should master meter systems be left to local regulation?

Mr. SEELINGER. In many cases again, they are not regulated by the States. I believe there are about 22 States who do not have authority over master meter operators.

Senator FORD. What can the Federal Government do?

Mr. SEELINGER. These operators are subject to the same safety standards as any other gas pipeline operator. However, since their primary business is not gas transportation, they have difficulty in understanding and complying with these standards.

The pipeline safety office is unsure how it should be exercising jurisdiction over them, but believes there may be a need for some reduced form of regulation more amenable to such systems.

There's concern over the potential hazards of these systems and they're not sure exactly how many thousands of them there are.

Senator FORD. Somewhere along the line, though the Federal Government is going to have to decide who has the responsibility.

Mr. SEELINGER. Sir, unless the States have accepted the responsibility, the Pipeline Safety Office has it. But, because there are so many of them, the office has not considered it practical to monitor them. They've been trying to get the States to accept the responsibility for them. Many of the States, however, do not want this responsibility.

Senator FORD. Should it then be local? Should the responsibility be assigned to the municipality, or make it a local responsibility?

Mr. SEELINGER. Local jurisdictions could do it, sir.

Senator FORD. Could do it if they wanted?

Mr. SEELINGER. That's right; there are many of these operators. The burden to monitor and seek compliance with—

Senator FORD. There's no mandatory requirement that they monitor these types of generators?

Mr. SEELINGER. No, sir.

Senator FORD. So they regulate it, if they want to, but often no one is monitoring these master meter operators.

Mr. SEELINGER. That's right. You see, the subject came up 2 years ago in the hearings before this committee. New York State pointed out they did not want responsibility over these operators, that they represented too big of a problem for them. They stated it would be a paper

jurisdiction they wouldn't be able to really properly monitor. So they left it to the Federal Government.

Senator FORD. If they can't monitor them, how can the Federal Government?

Mr. SEELINGER. Sir, they really don't know what they can do or should do with them. The idea is that the people living in these trailer courts and apartment complexes should be served by a safe pipeline system.

Now how they go about this——

Senator FORD. I agree. They ought to be served by a safe pipeline system. How do we go about it?

Mr. SEELINGER. Well, some States, what they've done, is actually outlaw master meter systems. In some States where they have master meter systems, the States are encouraging the large distribution operators to take them over.

These are two ways.

Senator FORD. As a Government, we should be concerned about the loss of valuable energy resources through pipeline leaks. But I'm talking about safety concerns here. Should OPSO be concerned about the loss of a valuable energy resource through pipeline leaks?

Mr. ESCHWEGE. I think you should be concerned. Of course, the highest concern, we would agree, is for the safety of human lives. But also, we should be concerned about leaks, not only because of loss of energy, but because of the pollution of the environment which results.

Senator FORD. Does DOT have any authority over this? Over the environmental problems?

Mr. ESCHWEGE. Yes; I would say they definitely do.

Senator FORD. Do you consider this to be included in the safety authority that Congress has delegated to DOT?

Mr. ESCHWEGE. Yes; I would think so.

Senator FORD. Are there leaks, for instance, in these pipelines that do not cause a safety hazard?

Mr. ESCHWEGE. There are many leaks that have never caused any particular problem. We know of hundreds of thousands of leaks——

Senator FORD. Hundreds of thousands of leaks?

Mr. ESCHWEGE. Yes; but they're not incidents; they don't cause anything. There are slow leaks, at least 700,000 estimated leaks annually.

Senator FORD. Are these leaks that are discovered and repaired?

Mr. ESCHWEGE. Yes; these are gas leaks.

Senator FORD. How many of the 700,000 are plugged?

Mr. ESCHWEGE. Well, we would hope most of them.

Senator FORD. At least you've got a pretty good idea of how many leaks we have annually. On the other hand, it looks like you don't know how many leaks are closed.

Mr. ESCHWEGE. Well, I would think I could take a good guess that most of them will be, because if they're not, eventually small leaks develop into big leaks.

Most of them are caught before they become big leaks.

Senator FORD. I want to say that's a very astute statement. If small leaks are eventually not discovered, they turn into big leaks.

Do you find that the Federal and State inspectors have sufficient training and experience to conduct inspections without guidance from MTB?

Mr. SEELINGER. Sir, on the Federal side, there's no question in my mind that they are well qualified. They're hindered only by the small field staff that they have. They cannot do all the things they would like to do.

As far as the States go, it varies by State programs. There are some very good State programs; there are some very poor ones.

Senator FORD. What guidance do they get? The State people.

Mr. SEELINGER. They voluntarily attend courses that are given by the DOT. In many cases, most of the State people have attended them.

As far as guidance in any kind of a manual format, there is none, sir.

Senator FORD. In other words, there's no written instructions, it's all oral. They have to take notes as if in class?

Mr. SEELINGER. There is correspondence. The problem that they have with the States, sir, is the fact that this is a voluntary program. And they do not feel that they have the teeth to force the States to do certain things.

Mr. ESCHWEGE. That is, sort of taking away their certification.

Mr. SEELINGER. So it's very hard to tell a State what to do and how to do it.

Senator FORD. Don't we give the States grants?

Mr. SEELINGER. Up to 50 percent of the cost of the program.

Senator FORD. It seems like we ought to have a little clout, since we're paying for half of a State's program.

Mr. SEELINGER. Sir, I think in some cases the States would be glad to have the Federal Government take the whole program over.

Senator FORD. That's typical. That starts down at the county seat level. They want the capitol to take it over, and the capitol wants Washington to take it over.

We become a big brother to everybody. I've seen legislatures pass legislation in order to prevent loss of funds. Is there anything in your report, in your recommendations, in regard to development of written instructions, or a manual, or something other than oral instructions to assist the States in carrying out new important programs?

Mr. ESCHWEGE. Yes; we allude to that in our statement, as well. What we need is some kind of a manual that your State inspector can follow in inspecting these pipelines, and some better guidance on which ones need more attention.

Again, though, as Mr. Seelinger has pointed out, it is a voluntary program and the only clout that the Federal Government has is to decertify the State. And in view of the fact that the Office of Pipeline Safety doesn't have much of a staff, I think they would be kind of reluctant to do that.

Senator FORD. How many States have been decertified?

Mr. ESCHWEGE. None. There was consideration, at one point, that the District of Columbia didn't have a very good program, but they did straighten that out; and hopefully there's a better program now in the District of Columbia.

Senator FORD. Did they name any other program?

Mr. ESCHWEGE. Although there are other States without adequate programs none have been decertified.

Senator FORD. There has been a thread, through the last few questions, that there are not sufficient personnel to get the job done. Do you have a recommendation as to additional personnel that should be given to this office?

Mr. ESCHWEGE. We don't have a number, Mr. Chairman. But my first recommendation would be that they ought to try and fill the slots they have.

As I pointed out in additional remarks to my statement, they have vacancies right now—

Senator FORD. Thirty-seven, I think you said, out of 50.

Mr. ESCHWEGE. They have 15 unfilled positions out of 52 authorized and I think they need to fill those. They may need some additional people. They've asked for 9 additional people for fiscal year 1979; for a total of 61. But as I understand it—and as I think you pointed out earlier—8 of those positions are for the Alaskan gas pipeline. So, we're actually talking about 53, or 1 more than what they had in 1978.

Now it's fair to say, though, that they did devote quite a bit of time, in 1976 and 1977, to the Alaskan oil pipeline because of all the problems that arose. We understand that in 1976, 25 percent of their effort was expended on the oil pipeline after all the problems arose.

Senator FORD. Apparently the office is 14 employees short today—37 versus 51. Is that correct?

Mr. ESCHWEGE. Thirty-seven versus fifty-two.

Senator FORD. Fifty-two. So that's 15.

If you were there as the director today, where would you try to select employees to plug the holes? What would be your first priority?

Mr. ESCHWEGE. I would first try to fill the slots that I have—

Senator FORD. I understand, but you have 15 slots. Where would you put those 15 people? Would you shift any emphasis within the office to certain areas, with 15 new employees?

Mr. SEELINGER. Sir, I believe the field would probably be the top priority.

Senator FORD. The field?

Mr. SEELINGER. Particularly as far as the compliance area goes.

If there's a second, it's probably in the regulation area where they seem to be way behind in things they should be doing.

Senator FORD. Well, let me ask you this question: Does having an acting director hurt the effectiveness of the office?

Mr. ESCHWEGE. I would think so. I have seen it in other Government agencies. If you have an acting director, he doesn't have the same clout with respect to his own employees, as well as with respect to the people that he regulates.

Senator FORD. From your knowledge of the office, do you have any indication that it's to be filled with a permanent director, soon?

Mr. ESCHWEGE. No; we don't.

Senator FORD. I guess we've got a vacancy I would look to fill, then.

We'll be sending some followup questions to OPSO, based on the issues that you've raised with us this morning.

I hope you will work with the committee to develop those issues and to help us improve the performance of the Office of Pipeline Safety Operations in the future.

I thank you and your staff for being with us this morning, and for being so frank with us.

Mr. ESCHWEGE. Thank you.

Senator FORD. The next witness is Dr. John Fearnside, Acting Director of Research and Special Programs for the Department of Transportation.

Jack, go ahead with your statement. Your complete statement will be printed in the record in full. If you want to read it, or highlight it, please do, whatever is your pleasure. We have 45 minutes.

STATEMENT OF DR. JOHN J. FEARNSIDES, ACTING DIRECTOR, RESEARCH AND SPECIAL PROGRAMS DIRECTORATE, DEPARTMENT OF TRANSPORTATION; ACCOMPANIED BY LEE SANTMAN, ACTING DIRECTOR, MATERIAL TRANSPORTATION BUREAU; AND CESAR DE LEON, ACTING DIRECTOR, OFFICE OF PIPELINE SAFETY

Dr. FEARNSIDES. Thank you, Mr. Chairman. I will submit it for the record, and I'd like to try and cut it down, in some respects in consideration of your time constraints.

I would like to read some of it, though, because a lot of it does address directly questions that did come up earlier.

In addition to Lee Santman, who is the Acting Director of the Material Transportation Bureau, we have with us Cesar DeLeon, who is the Acting Director of the Office of Pipeline Safety.

Mr. Chairman, I am pleased to be before your committee to discuss the DOT's pipeline safety program, particularly as it relates to activities since October 11, 1976—the effective date of the last authorization legislation under the Natural Gas Pipeline Safety Act of 1968.

The authority under that legislation to appropriate funds expires at the close of this fiscal year. We are before this committee seeking legislation to authorize additional appropriations in support of the continuing efforts of the DOT and the administration to insure the safe movement in commerce of hazardous gases and liquids by pipeline.

While the Department has had adequate resources to carry out an orderly development of the Federal pipeline safety program, the Department is requesting additional resources to increase the program's effectiveness and to support pipeline safety requirements associated with the mammoth undertaking to move Alaska natural gas to the Lower 48 States.

Although the Department's pipeline safety functions continue to be carried out by the Materials Transportation Bureau through its Office of Pipeline Safety Operations, a recent departmental reorganization has placed Materials Transportation Bureau within the structure of the newly created Research and Special Programs Directorate.

Like the Coast Guard, FAA, FRA, et cetera, the new directorate has the status of an operating administration. In addition to the Materials Transportation Bureau, some of the more important elements of this new administration related to the missions of OPSO are the Transportation Systems Center in Cambridge, Mass.; the Transportation Safety Institute in Oklahoma City; the Office of University Research; and the Office of Programs, Plans, and Administration.

The Transportation Systems Center provides a capability to identify and resolve national transportation problems which require advanced and coordinated systems and technological research and development. At the safety institute, courses are developed and training is conducted with respect to safety and security for all modes of transportation.

The missions of the Office of University Research are to stimulate university research activities with respect to transportation issues.

The stature of the directorate as an administration, and the colocation of the research and training capabilities with the pipeline regulation and enforcement functions in this administration are viewed by Secretary Adams as benefiting the effectiveness of the pipeline safety program.

Mr. Chairman, I'd like to divert a little bit and give you a quick explanation of Secretary Adams' idea, and where we think we're going with this.

The Materials Transportation Bureau, as it existed prior to this reorganization, was in fact not a whole organization. It had the regulations people, the enforcement people, and the State people, but it had no administrative staff of its own. It had limited capability to interact with technical staff throughout the department, and it depended on the Office of the Secretary as well for the legal support.

And as a matter of fact, Mr. Santman was the Assistant General Counsel in the Office of the Secretary, for materials transportation law. And after we went through a very extensive search for people, talking to the industry, talking to all the affected groups, we found out that we didn't think we could do any better than Lee Santman.

And despite his "acting" title, the Secretary has submitted his name to the Civil Service Commission for him to be the permanent director. These things do take a while. And one of the reasons this is taking a while, Mr. Chairman, is that we've decided to make this a permanent career position, as opposed to a schedule C position since my job—the Research and Special Programs Director job—is a schedule C position, and we have therefore the political level on top.

But in order to give stability at a high level to this organization, we are proposing this as a career position. It's going to take a little bit of time to take it through the CSC, but Lee's name is the one that we proposed.

The other thing that I'd like to bring up is that, as the new Research and Special Programs Administration—or, I should say—unlike the old MTB, will have its own personnel and procurement staff. And we intend to use that type of personnel and procurement staff to make things happen faster.

One of the reasons why we are not fully staffed up, as per the comments previously, is that we just, in fact, got our new positions—12 new positions—in 1978. We do depend on the Office of the Secretary to give us—to process our new positions, and we haven't been getting first treatment there.

We hope the new organization will help us get that to happen much more quickly.

Resources for the Department's pipeline safety program are authorized only under the Natural Gas Pipeline Safety Act of 1968. However, our responsibility for the safety regulation of all pipelines and associated storage facilities used for transporting hazardous gases and liquids in commerce is derived from several laws in addition to that act—and I won't read them.

Since the Federal gas pipeline safety standards were first adopted in August 1970, they have been amended 30 times; and the liquid standards, which were adopted in September 1969, have been amended 13 times.

One of the significant accomplishments in these amendments involves offshore pipelines. In territorial waters, the safety of these lines is regulated by the Department of Transportation; while lines on the Outer Continental Shelf are regulated by the Department, in cooperation with the Department of the Interior.

We are pleased to report that, in May 1976, the two Departments signed a memorandum of understanding establishing a division of Outer Continental Shelf regulatory responsibilities.

Under this memorandum of understanding, the Department exclusively prescribes and enforces pipeline safety standards for those Outer Continental Shelf pipelines lying between production facilities and the shore.

The Department of the Interior regulates the pipelines running between these production facilities and the wells.

Following completion of the memorandum of understanding, the Department amended both its gas and liquid pipeline safety regulations effective November 1, 1976. The amendments made the standards more effective for offshore pipelines in areas such as pipe design, buried depth, corrosion control, and repairs.

Regulations for the conversion of existing pipelines to gas or liquid service represents a third important achievement. Recent amendments permit liquid lines to be converted to gas transportation, or vice versa, simply by following appropriate conversion procedures and operation and maintenance requirements.

The procedures are designed to enable recognition and elimination of potential operating hazards. In the face of changing energy supplies and transportation patterns, these rule changes make it more desirable for industry to use existing pipelines to meet new demands, rather than to construct new lines.

One of the examples of this, Mr. Chairman, is the Sohio project, to bring the oil in from Alaska. There is now pending—there had been an environmental dispute on the question of whether to use an old gasline—part of the gasline—to bring some of the oil into Texas from an old natural gasline that's coming down from Alaska—the oil is coming down from Alaska.

It's a very important thing to be doing in this time limit, with a lot of change, where we're getting our energy supplies from more new origins than we had, historically.

Senator FORD. You know, that came as a very sudden surprise statement. I hadn't heard a thing about that, since we've been debating the Panama Canal Treaty.

Dr. FEARNSIDES. That's right.

In addition, the Department has promulgated several other rule changes, and has several pipeline safety rulemaking proceedings pending final action. By far the most significant of these is a comprehensive set of proposed changes to the Department's liquefied natural gas safety standards.

Extensive comments were received on an advance notice of propose rulemaking on LNG safety, issued in May 1977 by the Office of Pipeline Safety Operations.

New rules are contemplated to deal with the problems of selecting a safe site, protection against thermal radiation and gas dispersion, and guarding against the potential for a catastrophic spill.

Subject to cooperation with the U.S. Coast Guard under the provisions of a recently executed memorandum of understanding regarding waterfront LNG facilities, we expect to issue a notice of proposed rulemaking on this subject later this year.

Other rulemaking projects now underway will enhance the Federal standards, in light of changing technology and industry practices. Based on a recent contract study, new standards are being developed for transporting liquid petroleum, gas, and other volatile liquids by pipeline. That's a subject that was brought up recently, and in fact we are planning to come out with a notice of proposed rulemaking—at least in phase I—in a couple of months.

We also expect to issue a notice of proposed rulemaking qualifying personnel and procedures for joining of plastic pipe, which has been a factor in several recent accidents, as well as the subject of several NTSB recommendations.

At the same time, we are continuing a structured review to evaluate our existing regulations, particularly in the areas of corrosion control and welding of steel pipe.

Mr. Chairman, rather than giving you all of these details, let me say that the Secretary—as per the President's admonition—has set up a new regulatory review procedure in the department designed to do two things: first of all, to give him proper Secretarial review of all the regulations that are coming forward; second, to simplify and make clear—make more clear—the regulations that we do publish.

As a matter of fact, Lee Santman, in his previous job as assistant general counsel for materials transportation, had a great deal to do with developing that new procedure. And one of the things that it does require is for us to prioritize the regulatory actions that we're going to take.

We are working like crazy to get something out by the end of this month, for the Secretary, that gives us a good, sensible management approach to the development of regulations.

We would certainly be pleased to provide it to the committee as soon as we get it out.

Senator FORD. I noticed in the paper the other day the various uses of the word "priority"—you just used another one.

Dr. FEARNSIDES. "Prioritize" is one word that is really overused. Edwin Newman has taken us all to task for that in a couple of books.

Senator FORD. Cecil Andrus is given credit for that word in this administration.

Dr. FEARNSIDES. To support and guide us in regulatory activities in the past few years, we have completed or have under way 14 contract studies covering such subjects as technology for handling and storing LNG, transporting highly volatile toxic or corrosive liquids, including LPG, offshore pipeline safety, environmentally induced cracking in pipelines, outside force damage, and evaluation of the welding on the Trans Alaska Crude Oil Pipeline which, as was mentioned earlier, took up quite a bit of our time, and we'd like to address that and discuss why we feel we need so many people for the gas pipeline.

An area of continuing concern to our Department but one which we believe could be better handled through means other than Federal regulation is the serious damage to buried gas lines resulting from outside forces, particularly from excavation work and underground con-

struction performed by third parties. These activities continue to be the cause of the majority of gas pipeline failure incidents and is the No. 1 cause of liquid pipeline accidents, as well.

Because the pipeline operators over which DOT has jurisdiction seldom are responsible for the damage to their facilities resulting from such activities, DOT has looked to the States for solutions to such problems.

Since 1972 we have encouraged the States to remedy through legislation the serious problem of outside force damage.

In that regard, the Department's safety regulations provide exception to pipeline marking requirements where a program for preventing interference with underground pipelines is established by law. If such a program is not in place, line markers must be installed over each buried main and transmission line wherever necessary to identify the location of such lines.

In addition, in January 1977, OPSO drafted and succeeded in having included in the Council of State Governments' annual publication on suggested legislation a model Underground Utility Damage Prevention Act.

The Secretary contacted each of the State Governors and the Mayor of the District of Columbia, indicating his support of the model legislation and encouraging their initiative toward enactment of comparable State statutes.

Several States have very active programs for encouraging voluntary one-call systems such as those fostered by the American public works associations, utility location and coordination councils.

This latter effort has also received strong support from the NTSB.

However, we recognize that State laws may be needed in areas where such councils or voluntary programs are not active, or in instances where a utility or underground line operator chooses not to join in such a voluntary cooperative program.

To obtain current factual information about the effectiveness of pipeline damage prevention programs, we executed a study with the Illinois Institute of Technology Research in September 1976. That study, which has just been completed, included analysis and evaluation of State and local laws directed at excavation damage prevention and many other areas of State enforcement.

During the previous oversight hearings 2 years ago, OPSO reported the establishment of four regional field offices in San Francisco, Atlanta, Kansas City, and Washington, D.C., in addition to the existing regional field office in Houston. Since that time, the operational effectiveness of these field offices has been enhanced through the development of guidelines for the selection of compliance and enforcement inspections.

I'd also like to say, Mr. Chairman, that in line with what had been said a little bit earlier, that we in fact have assigned two additional people to the southern division, the central division, and the western division. In the field offices among those 15 that were short and the 15 people that were below our existing authorization, we are putting 2 more people in each of the major regional offices.

Senator FORD. Are they fully staffed now, all the regional offices?

Dr. FEARNSIDES. They are not, sir. We're going to add two more people to them in this fiscal year as soon as we can get through the paperwork in CSC.

Senator FORD. How long do you think that will take you?

Mr. DeLEON. We've already picked people for the position. We're just trying to get them OK'd by the CSC, and I think three of them have been verified as being OK by the CSC.

Senator FORD. But the question I asked previously—are all the regional offices fully staffed with the number that you now have?

Mr. DeLEON. Excluding the new positions we have one opening in the eastern regional office.

Dr. FearnSides. Training of the OPSO regional and State personnel in specific technological areas, in surveillance and enforcement and in accident investigation techniques, to assure compliance with State and Federal programs continues.

The OPSO inspection program establishes a selection of operators for inspections on an annual basis and takes into consideration the types of pipeline systems having the most noncompliance and potential problems—travel schedules and the availability of resources both at the Federal and State commission level.

During 1976 and 1977 OPSO personnel conducted 250 natural gas pipeline and 68 liquid pipeline inspections.

Senator FORD. Did you find 700,000 leaks last year between you and the States?

Dr. FearnSides. I think between we and the States we did find 700,000, sir.

Mr. DeLEON. They report those leaks to us annually, and they reported somewhere around 750,000.

Senator FORD. Is the number growing each year?

Mr. DeLEON. No, sir; it's staying steady.

Senator FORD. So 700,000 leaks annually?

Mr. DeLEON. Yes, sir. It varies between 700,000 and 750,000.

Senator FORD. Does age of the pipes have anything to do with the number of leaks?

Mr. DeLEON. Yes, sir. It's time related.

Senator FORD. Is it time related as it relates to the pipe or the connection of the joints?

Mr. DeLEON. As it relates to the pipe.

Senator FORD. The pipe itself, not the connection.

Mr. DeLEON. That's right.

Senator FORD. We talked about plastic pipe a few moments ago.

Mr. DeLEON. Half of the 700,000 leaks are due to corrosion, sir, and corrosion is a time-related phenomenon.

We had it broken down by the age of the pipe. The leaks broken down by age of the pipe.

Senator FORD. How often are the pipes replaced?

You say it's steady between 700,000 and 750,000. The leaks, probably half of them are age related. How often do you require the pipes to be replaced?

Mr. DeLEON. There's nothing in the regulations that require periodic replacing.

You might recognize that since half of the leaks were due to corrosion, the corrosion regulations just came into effect about a year ago. So I think that in the future you'll see a downward trend in the amount of leaks being reported. It does take a while to start having an effect.

Again, there's nothing in our regulations that specifically has an

operator replace pipe. Only when they cannot be fixed, then they'll replace them.

Senator FORD. Can we expect the corrosion and leaks to accelerate?

Mr. DeLEON. No, sir; you can expect them to go down because the regulations now require methodical protection to be applied to the system.

Senator FORD. You said a few moments ago that you were working on a procedure whereby you approved the sealing of plastic pipe. How large are the pipes you allow for the transportation of gas through plastic pipes?

Mr. DeLEON. Plastic pipes are only used in distribution systems, distribution systems being the grids inside cities, and normally those only run up to about 4 inches. Plastic pipe is not used in high-pressure systems. They are used for mains and services.

And more than half of the present replacement of distribution pipes are now plastic. They went to more than 50 percent in 1976.

Senator FORD. What is the lifetime of plastic pipe compared to metal pipe and steel?

Mr. DeLEON. Since they've only been used for the last 10 or 15 years—when they came into vogue—we don't know.

We have determined that there are some problems with the joining of the plastic pipe, and we're in the process of establishing regulations for the procedures and the personnel that are joining the pipe to assure better joining procedures.

But we don't have enough record.

Senator FORD. Fifteen years is not enough to give you some sort of educated guess or judgment?

Mr. DeLEON. We do have a large number of leaks in plastic pipe, leaks per mile, when related to steel pipe. There's about four times as great a leak rate per mile in plastic pipe than there is in steel pipe, and it's normally due to the fact that there's a lot of excavation activity where they are placing the plastic pipe.

Senator FORD. It looks like you've got some kind of record, though. You've got four times as many leaks in plastic pipe as you have with metal. How much pipe now in the ground has been there over 15 years?

Mr. DeLEON. Plastic pipe?

Senator FORD. Any kind of pipe.

Mr. DeLEON. Over 15 years?

Senator FORD. What percentage?

Mr. DeLEON. About 85 percent.

Senator FORD. Eighty-five percent of all lines have been in the ground longer than 15 years.

Mr. DeLEON. At least that much. Maybe more. I could get that for the record.

Senator FORD. That's all right. That's close enough. You've got it in the ballpark.

What is the lifetime of a metal pipe?

Mr. DeLEON. There's some pipe that's been in the ground over 100 years, sir.

Senator FORD. How's the corrosion on that?

Mr. DeLEON. They're replaced when they excavate due to a leak and see that it needs to be replaced.

Some of the larger cities on the east coast, obviously, have very old pipe.

Senator FORD. I interrupted your statement, Doctor.

Dr. FEARNSIDES. That's fine, sir. As a matter of fact, Mr. Santman has pulled out something we could submit for the record on the age of pipe, how many years it's been in the ground all the way back to 1930. Some 168,800 miles of it go unknown before 1930. But certainly before 1930.

Senator FORD. Submit that for the record then, please.

Dr. FEARNSIDES. We will, indeed, sir.

[The following information was subsequently received for the record:]

AGE OF GAS PIPELINES

[In miles]

Construction years	Distribution lines	Transmission and gathering lines	Total
Unknown	168,800	9,063	177,863
Before 1930	113,100		
1930 to 1940	52,900		
1940 to 1950	80,300	133,693	601,593
1950 to 1960	221,600		
1960 to 1970	329,000	83,230	412,230
1970 to present	73,700	31,321	105,012
Total	1,039,400	257,307	1,296,707

MILES OF GAS PIPELINE BY DATE OF INSTALLATION

When installed	Miles ¹	Leaks repaired per mile in 1975
Distribution:		
Unknown	96,104	1.436
Prior to 1930	65,881	2.037
1930 to 1939	24,743	2.092
1940 to 1949	38,218	1.808
1950 to 1959	130,150	1.094
1960 to 1969	211,476	.529
1970 to 1975	97,738	.911
Total	664,324	1.158
Transmission and gathering:		
Unknown	9,063	.227
Prior to 1960	133,693	.078
1960 to 1969	83,230	.012
1970 to 1975	31,321	.046
Total	267,079	.056

SIGNIFICANT GAS LEAKS REPORTED UNDER 191.5, 191.9, AND 191.15

	1975	1976
Distribution:		
Failures	979	1,036
Fatalities	8	53
Injuries	220	319
Transmission:		
Failures	394	543
Fatalities	6	10
Injuries	17	47
Gas industry totals:		
Failures	1,373	1,579
Fatalities	14	63
Injuries	237	366

¹ Service lines not included.

Dr. FEARNSIDES. During 1976 and 1977 the Department expended and contracted for considerable resources with respect to activities on the Trans Alaska Crude Oil Pipeline. Particularly, we were dealing with the integrity of the welds, and it did take an enormous amount of the Office of Pipeline Safety's time when, as we mentioned, it was one of the reasons we will be getting into discussing the need for people on the Alaska natural gas pipeline.

Significant effort has also been devoted to monitoring and guiding the State commissions in the developing of State pipeline compliance and enforcement programs. Each State agency has been monitored at least once and many States twice a year to assure the conduct of an adequate pipeline safety pipeline.

This activity includes monitoring the conduct of State performed inspections of operators in the field.

We do in fact, sir, have and provide guidelines to the States on how they should conduct inspections while they select the people who should be inspected, and we have several manuals that we do put out.

Senator FORD. It was the information we received from the previous witness that there was no manual. There were no guidelines. It was all oral. And the States come on a voluntary basis.

Dr. FEARNSIDES. Notwithstanding that you think that everything happened last week because of this hearing, sir, this manual that I am holding, in fact, has been in the works for quite a while.

Senator FORD. Congratulations.

Dr. FEARNSIDES. Yes. And this draft I am holding is the procedural guide for the States' gas pipeline safety program, and supplements and complements what we have given you before. And this is due out in final form very shortly.

Senator FORD. Is this mandatory or does it merely contain recommendations?

Dr. FEARNSIDES. These are recommendations. But our recommendations, of course, are backed up by the way we evaluate their request for recertification. So when we score them as to how well their State program is, the way we score them is on the basis of this particular type of guidelines that we give them.

Senator FORD. How many have you decertified?

Dr. FEARNSIDES. We in fact haven't ever decertified any, sir. As was mentioned earlier, we refused for about a 6-month period to recertify the District of Columbia until they got an adequate staff. They added a man to do this.

Senator FORD. A man?

Dr. FEARNSIDES. Yes.

In particular, this is what was needed in the District of Columbia, as per our calculations. But we had in fact given some of the States a good bit of trouble, a good bit of pressure, and do threaten them, at least, with not giving them a full amount of support in our grant program if their programs are inadequate.

Senator FORD. How many States have said, take it back?

Dr. FEARNSIDES. There are two States, Texas and Oklahoma, that don't take any money from us. They're very big States' rights people.

Senator FORD. And they've got a lot of pipelines, too.

Dr. FEARNSIDES. They do, indeed.

Senator FORD. But that's the only two States that do not take money from you.

Do any other of the 48 States say, "We want you to take over the inspection; we want you to do it; keep your money?"

Dr. FEARNSIDES. Forty-seven States are in our 5-A status, which means that they have volunteered to do it for us.

As a matter of fact, several other States even do the interstate, including Kentucky, sir, as I remember.

And so, for the most part, the programs are going along in a very nice, cooperative way. There are States that haven't met our standards, but if you do take some of the money away from them, then you're not encouraging them to have as good a program as possible, and it's kind of a carrot and stick.

Senator FORD. How much money does Alaska spend on their pipeline program?

Mr. DELEON. For 1978, they didn't submit a certification. So that's the first State that has pulled out of the program. So we have one State that is not in our program this year, that being Alaska. Alaska, the last time we allocated to them, I think, something in the neighborhood of \$12,000 or \$13,000. I think that's all they asked for.

Senator FORD. How much did they spend? Do you have any idea?

Dr. FEARNSIDES. We have those figures, sir. We'll be happy to submit them for the record.

Senator FORD. How much did the State of Alaska spend?

Mr. DELEON. The application for grant-in-aid assistance submitted by Alaska for 1977 indicated their intent to spend \$25,000 for the gas pipeline safety program. Consequently, we set aside \$12,500. We have recently received the Alaska expenditure voucher which indicates that they only spent \$3,031 on their gas pipeline safety program. Therefore, we will provide \$1,516 based on their spending about twice as much, or \$3,031.

Senator FORD. They're just matching your expenditures?

Mr. DELEON. They're matching, yes, sir.

Senator FORD. And 25 percent of the time of the office was spent on the so-called Alaskan pipeline?

Dr. FEARNSIDES. Sir, I think I should address that directly, because, in fact, we make a distinction between the work that is done both on the crude oil Alaskan pipeline, and on the Alaskan natural gas pipeline, because of the fact that the Congress has written in very specific and strict monitoring requirements on those two particular pipelines.

The normal pipeline, or the normal pipeline activity in Alaska, is handled by our western region. So we separate the normal State operations from these and fund the State only for its intrastate gas programs.

But as you recall in the legislation for the oil pipeline, and for the gas pipeline, there were very, very strict environmental and safety concerns written in. And, in fact, a requirement for the Federal people to do the monitoring and enforcement.

And we got burned very badly on the Alaska crude oil pipeline by delegating our responsibility to another agency, thinking that that would take care of things, and continuing along as normal, giving them technical advice.

Then we wound up having to put a massive effort on solving some of the welding problems that accrued as a result of some rather unfortunate management problems they had up there.

So in this regard, the Department has taken a very aggressive position with respect to the Alaska natural gas pipeline, and we don't want to give up our statutory responsibility this time. And we have found that some of the most important aspects of our responsibilities in this area are things that would really be done best if we did them during the planning and design phases as opposed to the construction phase.

Now, what we will do, Mr. Chairman, with the eight people that we've asked for, we're putting those people on a limited career-type of an appointment, whereby their career, or their claim on jobs, only exists during the construction of that pipeline. That is, we're not bringing them on in a way that once the Alaska natural gas pipeline is finished, we'll have to find jobs for them.

So it really is an unusual program, given the intense amount of congressional and executive branch interest. We're working with five other agencies—well, with four other agencies, to try to bring some sense to the Federal presence in this regard.

Senator FORD. Your function is safety?

Dr. FEARNSIDES. Our function is safety, sir, yes.

As a matter of fact, we do not have any strictly environmental responsibilities although we work very closely with EPA. A lot of the things, of course—leaks, especially liquid leaks—can give you as much of an environmental problem as they can safety problems. And we've worked with the Department of Interior and EPA on joint interests in oil and gas pipelines. But gas is not really as much of an environmental problem, I would say, as oil.

Senator FORD. Let me ask you this: Briefly, what are the safety problems involved in the construction and operation of a gas pipeline in Alaska?

Dr. FEARNSIDES. There are very few safety problems involved in the constructing. What we try to do, what our effort there is going to be, is making sure the thing is well-built, so that downstream we don't have any; in the operation of course, leaks can cause explosions. And as you know, there have already been a couple of major disasters up there, or at least one in pump station No. 8 on the Alyeska crude oil line. And we could easily, without proper advance planning and technical examination of the design, and without good monitoring, in the operational phase we could certainly have a repeat of that kind of performance.

Senator FORD. Well, doctor, let me ask you this: Would more people be exposed to danger with the rupture of a gas pipeline in Alaska than in any other State?

Dr. FEARNSIDES. No, sir. The idea, principally, is an idea of what damage it would do to the Arctic environment, which is considered to be very precious.

Senator FORD. I thought you weren't in the environmental protection area?

Dr. FEARNSIDES. We are not, but the kinds of restrictions that are put in both by the certificates of public convenience and necessity and

the EPA and the Department of Interior conditions see the same things that keep our—that keep pipelines safe also keep it environmentally sound. And we're the experts on pipeline safety.

Senator FORD. Would the rupturing of a liquid petroleum gasline in a more populous State endanger more people than the rupture of the Alaskan gas pipeline?

Dr. FEARNSIDES. Well, the idea, sir, is the idea of the tremendous environmental—in the sense of weather—concern that we have. In building a pipeline in the Lower 48, as everyone has said so far, we have—there's a very good safety record for that. The problems with construction and operation in the Arctic environment are entirely different, and brought a lot of things that had not been previously experienced into play. Some of the tremendous design problems that you had to get into in the oil pipelines, putting them on the vertical support members, et cetera, are an indication.

With respect to the gas pipeline, at least there were some very, very, very high pressure proposals being made. The pressure won't be quite so high if we go forward with the 56-inch pipe that the Canadians have recommended. But it's still going to be very, very high pressure pipe. It's, what? 1,260? 1,260 pounds per square inch in those pipes, and there'll be some very interesting kinds of new steel, X70 steel, being put in there, that we are commenting upon technically. And there's the possibility of putting, of having to put crack arresters around the pipe to keep—if you do have an unexpected fracture, to keep it from continuing down into other sections of the pipe. There may be a need in the Arctic environment to have so-called crack arresters, which are like something that pressures the pipe so that if it does fracture, it can't go too far, because you have these coils wrapped around it?

Senator FORD. Why has Alaska withdrawn from the program, then?

Dr. FEARNSIDES. I think Cesar would have a better explanation of that.

Mr. DELEON. Their letter to us telling us that they were not going to participate in the program, starting this year, attributed it to the need for personnel to attend to other regulatory commission matters, and didn't specifically tell us why they chose to drop the program.

Senator FORD. Is it because they want a free ride?

Mr. DELEON. Is it because they want a free ride?

Senator FORD. Yes, a free ride.

Mr. DELEON. First of all, sir, you've got to recognize that, like Dr. Fearnside said, that the program is only applicable to Alaska's intrastate gas pipelines.

Senator FORD. We're talking about the Alaskan gas pipeline, and they've withdrawn from that.

Mr. DELEON. Well, sir, we are talking about their responsibility only for intrastate. The new pipeline comes under the Alaska Natural Gas Transportation Act, and that's interstate and covered by the Federal Government.

With respect to intrastate gas systems in the State of Alaska, there were only three, sir. So they don't represent a large segment of State work. There are three small systems, and they saw the opportunity, maybe, for the Federal Government to take over that responsibility.

Senator FORD. Let me just look at your request here for a minute. You want eight additional people for the Alaska gas pipeline.

Mr. DeLEON. Yes, sir.

Senator FORD. You're asking for \$1,246,000 for contractual services as it relates to the Alaska natural gas pipeline system.

Now, does Alaska have any interest in this at all? Should they be asked to kick in some money here? They get 95 to 5 on interstate highways. They get special consideration on everything, and I don't object to that, because they have very frigid conditions. But then some other States that are right on the freeze line, that have the same damage as the ones 500 yards above it, get cut. You're asking for a million-two, and yet Alaska is not even joining the program. And you said there's not much of a safety problem.

Dr. FEARNSIDES. I don't think I said that.

Mr. DeLEON. Yes, sir. Remember, we're talking about—the money we're asking for is for the big line to bring the gas through Canada to the United States. That's a Federal Government responsibility, because it's an intrastate line.

Senator FORD. Inter——

Mr. DeLEON. I'm sorry; interstate line.

Our principal concern with that is to assure the structural integrity of that pipeline. It's going to provide 10 percent of the gas of this country through that one pipeline. Our principal concern is to be sure—because it is the first gas line in an Arctic environment, and we want it to be reliable, safe, and economically efficient. And that's our principal concern on that pipeline.

We think we have the expertise in DOT to help the Federal Government assure the safety, reliability, and economic efficiency of that line.

Senator FORD. Do you think you'll ever get the money for it out of the House, based on the fact that no American contractors are going to be involved in building it?

Dr. FEARNSIDES. Well, sir, there are going to be American contractors, both in Alaska and in the Lower 48.

Senator FORD. I only know what I read in the paper.

Dr. FEARNSIDES. No; that's very true. And we, as a matter of fact—Mr. Santman and Mr. DeLeon have both spent a good deal of time in dealing with the Canadians in the past couple of months to provide technical advice and consultation to the U.S. side as far as the safety of the higher pressure 48-inch pipe versus the lower pressure 54- or 56-inch pipe.

We're already working on spending a good bit of our own time on this. I'm on the executive policy board. And as I've said, Mr. Santman has been our principal—he's been leading our effort in Canada. Our normal role has been expanded with the special legislation, and with the subsequent Presidential decision. We're being required by the President and the interagency commission to carry out certain functions. And this is what we think we need to do them.

So if we had our druthers, for example, we would not try to have a tremendously involved Federal presence in the Lower 48 on the western leg, on the eastern leg. We're trying to work that out within the framework of the interagency group.

But it is a different beast for us. And what we would like to do is to set up a separate Alaska pipeline office to report to Mr. Santman and

keep that off to the side and continue to work our intrastate problems with grant programs out of the existing office of pipeline safety operations.

Senator FORD. You made a statement a moment ago that you're interested in the safety and the economics and the environmental effects—you're in the whole ballgame.

Dr. FEARNSIDES. As a member of the President's team, we're in the whole ballgame.

Senator FORD. Well, let's talk about the economics of it. This is a so-called wet gas, isn't it?

[No response.]

Senator FORD. The answer is "Yes," doctor.

Dr. FEARNSIDES. OK.

Senator FORD. It is a wet gas, and has to be filtered, doesn't it? Do you get into that part of it as it comes out?

Mr. DELEON. When you talk about wet gas, they'll do the processing on the North Slope. But they'll be bringing down some propane and butane with it. Is that what you're referring to, sir?

Senator FORD. But as I understand, you filter out the oil and it goes back, is that correct?

Mr. DELEON. Yes.

Senator FORD. And you talk about the economy of it. What is it, 60 to 90 cents, just to filter it?

Mr. DELEON. I don't know.

Senator FORD. You said you were concerned about the economics of the pipeline. You're just talking about the construction?

Mr. DELEON. Sir, I think I made an overstatement on the economics.

Senator FORD. I didn't know whether we are getting into economics, I wanted to talk to you just a little bit.

Dr. FEARNSIDES. No, sir. What I meant to imply was that in order to answer some of the economic questions that the Federal Energy Regulatory Commission is required to answer in order to see what kind of an arrangement we should come to with Canada, they needed answers to certain technical questions. And our people went out there and provided the answers to those technical questions, so that they in fact could look at the whole cost of service and economic tradeoff questions.

We're not in economics.

Senator FORD. But in what fields did you give your expertise to the firm for their considerations of the economics of it?

Dr. FEARNSIDES. It had to do with whether or not we felt that the 48" 1,680-pounds-per-square-inch pipeline was, in fact, a safe alternative, because, in fact, we understood there were economics that could be gained from having the higher pressure pipe in that regard. That is, that the 48" pipe could give you operating economies, the 48" higher pressure pipe could give you operating economies over the 54-56" pipe with lower pressures. And they were working back and forth on that, and our people were up there trying to make—the Canadians claimed that it would take 2 years to test whether or not a 1,680 pipe, in fact, was a safe pipeline, and we went up there and pretty much dispelled that argument, although I would like to have Mr. Santman give you the details of what we did since he was our chief representative up there.

Mr. SANTMAN. The applicants to build the pipeline wanted to put in a 48" 1,260-pound-per-square-inch pipeline that would handle all of the gas coming down from the Prudhoe area of Alaska, with the thought that later on, when the Canadian gas would come on line from the Mackenzie delta area, they would use the conventional technique for increasing capacity, called looping. They would put a duplicate pipeline alongside.

Both the Canadian National Energy Board and our Federal Power Commission, now the Federal Energy Regulation Commission, thought that it was better to build in the increased capacity at the beginning rather than wait and try to increase the capacity when the Mackenzie gas came on line.

They disagreed, however, as to what was the best way to do that. The Canadian preferred position was to use a large diameter pipe, relatively thin-walled compared to the 48-inch-thick wall at higher pressure that we were talking about.

Senator FORD. Larger pipe gives you 1,260 per square inch?

Mr. SANTMAN. The Canadian Government's original proposal was for a 54" 1,120.

Senator FORD. A 54" 1,120?

Mr. SANTMAN. Yes, with a half-inch wall thickness to the pipe.

The Federal Energy Regulatory Commission had heard a lot of testimony from one of the losing applicants, Arctic Gas, favoring a high-pressure 48" system, that is, 48" pipe, 3/4-inch wall thickness, 1,680 pounds.

They had a lot of data on that, as well as the basis 48, 1,260. Their position, the Federal Energy Regulatory Commission's position on the way to build the needed long-term capacity was to go with the high-pressure system. The debate then focused around those two options.

The Canadian National Energy Board people had taken the position that the 48" 1,680 was such an advancement on the state of the art—that it was a quantum leap beyond the roughly 1,000 per square inch systems that are common today.

There were those, of course, who suspected that the Canadians' real reason was because the Canadian mills did not have the capacity to build the thicker-walled pipe that would be required and the 48" high-pressure system. The other side of that coin being that the only facility in the United States capable of building large pipe was the U.S. Steel plant in Houston that could build the thick-walled pipe but it could not build anything larger than 48" diameter.

And it was with this background that we were called upon to address the arguments that were being thrust upon us by the Canadians, that 1,680 48" was such a quantum leap; it was advancing the state of the art too fast; it required crack arrestors; and there wasn't steel tough enough in production amounts to meet the demands of that pressure.

And our contribution was to deal with those questions: Is there equipment available? Can steel of the right quality be produced in sufficient amounts? Are there true technical obstacles to going to that high a pressure?

And the conclusions that we came to, basically, were that any of the systems that were being talked about could be built. Any of them

could operate safely and reliably. The capital costs of putting in any one of the systems that had been talked about was pretty close to the same.

The Federal Energy Regulatory Commission then carried that information further. They costed out the operating costs for each of the different systems. The collective information served as the basis for the communicated position of the United States to the Canadian Government on the ultimate selection.

On the Canadian assertions our contribution was in trying to dispell the questions that were being raised and answer the real gut question: Among the various systems, the alternatives—are there any of them that would not be reliable or safe? Our answer was “No, there are not. Any of them can be done. Some of them impose a few more testing problems.”

One other conclusion that we come to was that if we insisted on testing all scenarios, all possibilities, we probably would run the risk of a long test period that would likely eat into the construction time schedule that both nations were thinking of.

Senator FORD. We got diverted from your statement a bit there.

Dr. FEARNSIDES. I've just been reviewing it, Mr. Chairman, to see if I can cut it down. I think what I'll do is just to mention one other program that we've started since I think what we've really done is used this as a highlight for questions. I know that you have some concerns, and I want to be sure you had plenty of time to discuss those.

In particular, I'd like to focus on operators that are found to be in noncompliance with Federal safety regulations and who are subject to civil and criminal penalties, depending upon the nature of the commodity being transported.

We talked earlier about having civil penalty authority in the natural gas area, but in liquid gases having only criminal penalty authority. Although penalty action is an adequate deterrent to most noncompliance, this is not always the case, particularly in the case of small municipalities that own and operate natural gas distribution systems.

Our inspections of those systems have revealed that many of these systems fail to meet minimum safety standards due to serious and widespread physical deterioration. When our inspection reveals that a municipal gas system does not comply with Federal gas pipeline safety regulations, local officials are advised of the town's liability for a civil penalty. In many cases, these localities are not financially able to pay a penalty. And what is more, they don't have the resources to repair or replace their unsafe pipeline.

To find solutions to this serious problem, the department has sought the assistance of the Departments of Commerce and Housing and Urban Development. Commerce, through the Economic Development Administration, carries out the operating provisions in the Public Works and Economic Development Act of 1965. As we perceive the purpose of that act, it is to help restore, by way of direct grants to State and local communities, the economic health of areas burdened with unemployment and low family income. It appears to us that such EDA-administered grants could well serve to assist small municipalities that own and operate unsafe gas distribution systems.

The appropriateness of such EDA assistance rests on the recognition that the safety of life and property and the continuance of job

opportunities are clearly in jeopardy unless gas leakage from deteriorated systems is corrected.

The Department of Housing and Urban Development, through its community development block grant program, makes discretionary grants under title I of the Housing and Community Development Act of 1974, in order to support community development activities directed toward the elimination of conditions which are detrimental to health, safety and public welfare.

The grant program is also meant to improve the quantity and quality of community services for persons of low and moderate income for the development of viable urban communities. Urban communities with deteriorating gas distribution systems which have made applications for HUD discretionary grants in the past in order to repair or replace those pipelines have generally been unsuccessful. This seems to be due principally to one category of HUD selection criteria in which serious and imminent threats are defined. These definitions were apparently drafted with water contamination in mind.

On February 15, 1978, after considerable advanced staff-level contact between the Departments, Secretary Adams formally proposed to Secretaries Kreps and Harris interdepartmental cooperation to achieve the benefits to pipeline safety afforded by the grant programs they administer.

Mr. Chairman, I'll just keep the rest of it for the record, since some of it has to do with the Alaska natural gas that we've already talked about, and we, of course, will be pleased to answer any questions.

Senator Ford. Thank you very much, Doctor.

One thing that I think is evident here, at least based on the statements from Mr. Rogers earlier and yourself in regard to Federal-State cooperation. It appears that a good working relationship has been developed. I believe this is what Congress envisioned, at least in my opinion, in the area of compliance with the pipeline safety programs. And I hope that you will work hard and very closely together for an even higher level of cooperation in the future.

Doctor, the committee submitted an extensive list of questions to the Department prior to this hearing, and I'd ask you to see that the responses are returned to the committee by the end of this week.

Dr. FEARNSIDES. We certainly will, sir. We have most of them already prepared, and I made a couple of refinements and I know Mr. Santman did over the weekend, and we will be pleased to have them in by the end of the week.

Senator Ford. OK.

Let me ask you a very perplexing question. When will a permanent director be appointed for OPSO?

Dr. FEARNSIDES. Of OPSO? Let me say, first of all, Senator, that Mr. DeLeon has both our utmost confidence; that is, his effectiveness for the time being is not diminished.

Having said that, what we have done has put in—Mr. Santman and I have put into the Assistant Secretary for Administration a rather extensive reorganization of the Materials Transportation Bureau that separates out the enforcement and compliance functions from the regulatory development functions, both in the Office of Pipeline Safety and in the Office of Hazardous Materials Operations.

We have proposed super-grade-level people to run each of these organizations, and would propose a supergrade person to run, of course, the Alaska Pipeline Office as well. And as soon as we get this through and approved by the CSC, we will, in fact, put forward our candidate for that super-grade-level job. And, of course, given the CSC procedures, we can't give you an exact time. Given that it is a competitive thing, we can't tell you that we'll have one tomorrow. We've got to go through all that process, and I don't intend for this to be a "Meet the Press" answer, Mr. Chairman.

Senator FORD. You've done a pretty good job at it, however.

Dr. FEARNSIDES. We have, in fact, put our reorganization—it's been in a month now. We're working on it very hard with the Assistant Secretary for Administration to get Office of the Secretary approval. And as soon as we get that approval, we're going to go to the CSC and establish a permanent director.

Senator FORD. Do you have any ballpark time figure for when you think this will be accomplished?

Dr. FEARNSIDES. Well, when I first came to the department, Mr. Chairman, 5 years ago, as a career employee, it wasn't until this administration that I converted over.

Senator FORD. Converted over to what?

Dr. FEARNSIDES. To a political appointment.

Senator FORD. Oh.

Dr. FEARNSIDES. And it took me 18 months, between the time they told me they wanted me to come in and run this program for them and the time I got here.

We hope that we can make it happen a lot sooner than that, especially since we hope that there will be a lot of attention and we'll get a lot of secretarial attention on this to make sure that at least the people in our Department give it the highest priority.

Senator FORD. I may give them some help.

Why has the Department recommended that we abolish the advisory committee?

Dr. FEARNSIDES. As you know, the President came out with a request for a sweeping abolition of advisory committees, in that context. The Secretary had a special task force to look over the advisory committees. And in particular, he came down pretty hard against advisory committees that he perceived were only industry advisory committees, or essentially, industry advisory committees.

And one of the problems we have with this one, Mr. Chairman, is, that the public members, the six public members that we have, are required by law to know a good bit about and have cognizance over pipeline safety matters.

So we wind up with consultants who are not entirely divorced from industry; and in many cases, they can be considered to be industry types of members.

So it's felt that given our inability to come up with public people who are truly public members, that perhaps what we ought to be doing is trying to have more educational campaigns and use the existing Administrative Procedures Act, with the comments in the Federal Register and all of that, and special symposiums and public seminars, to try to encourage a more eclectic input to the types of regulations that we're getting.

Senator FORD. We're getting to the point where we want people to come on board and help operate the Federal Government, that have no experience at all.

But why couldn't you go to retired members of State regulatory agencies, who are still capable and qualified and have a lot of expertise and experience?

Dr. FEARNSIDES. We can do that, Senator. But let me say—

Senator FORD. Well, why haven't you?

Mr. DELEON. We have two retired members on the committee now representing the industry. We still have the problem—I'm sorry, representing the public.

Senator FORD. I would hope so.

Mr. DELEON. Representing the public. We still have the problem, sir, that they used to work for the regulatory commissions. They do give a public view. But we're limited to that sort of person that we could get.

We wanted—we envisioned something like a public interest lawyer.

Senator FORD. Are they career public service people?

Mr. DELEON. Yes, sir.

Senator FORD. Aren't they operating in the public interest?

Mr. DELEON. Yes, sir, they are.

Senator FORD. I don't understand why they don't qualify.

Mr. DELEON. They do qualify, sir. We put them on.

Senator FORD. Why don't you get more of them, then?

Mr. DELEON. Well, we thought we could get some persons that were not retired that were representing public interest.

Senator FORD. Well, have you?

Mr. DELEON. No, sir, because they wouldn't be qualified, because they wouldn't be knowledgeable in the operation of a pipeline.

Dr. FEARNSIDES. What we were trying to do is to get some of the people from the Sierra Club or the Friends of the Earth or something like that on there to get a more, as I say, eclectic input.

We—

Senator FORD. Have those groups recommended anybody?

Dr. FEARNSIDES. Well, they have, but they're not qualified.

Senator FORD. One's not qualified, and the other is not in the public interest. What are you going to do?

This just doesn't make sense. I would not want somebody to come in and work for me, and put them in a high position, who doesn't know a darn thing about the operation or the safety of the pipeline. How did you get where you are?

Dr. FEARNSIDES. By learning what was important, sir.

Senator FORD. OK. Or being placed just right, so you have some experience and background. It just bothers me that we're excluding anybody from business that has no direct interest, background, knowledge, and training.

Dr. FEARNSIDES. As you know, sir, there are some industry people in it. Maybe the thing to do would be to have a change in legislation that just requires State people and industry people, and not have the six public members.

Senator FORD. The thing that bothers me is that I don't believe you're trying hard enough to get public people.

Dr. FEARNSIDES. Well, sir—

Senator FORD. You say the Sierra Club, Friends of the Earth, have submitted people, but they're not qualified.

Dr. FEARNSIDES. By the law.

Senator FORD. Should we change the requirements of the law, then?

Dr. FEARNSIDES. That would help us.

Senator FORD. Wouldn't that be better than abolishing the committee?

Dr. FEARNSIDES. What we were going to do is see how it went with public meetings, with seminars and workshops and things like that; and of course with the public comment period; and see how it went.

Senator FORD. How long would it take to see how it went?

Dr. FEARNSIDES. We're still operating with the committee, Mr. Chairman, and as a matter of fact have met with them, and just met with them on the 15th of January. The positions are all filled, and we're still going along with the committee as is and still interacting with it.

But if in fact it is abolished, then we will do our best in trying alternative ways. And if the alternative ways don't work out, we'd be happy to submit legislation to make it easier for us to get a well-rounded committee.

Senator FORD. I don't want it to be too easy for you. I just want you to work a little harder. I'm going to be watching and see how hard you work.

Dr. FEARNSIDES. For example, we have gone to several universities with some of the real experts, for example, in natural gas. We find out that some of those professors are making too much money, that our \$100 a day isn't enough to attract them.

Senator FORD. Did you ever talk to a university and see if they'd feel it was prestigious enough for them to have an individual on that board and for them to make up the difference in the salary? That's been done lots of times. Have you every tried that? No? Did you ever think about it? I've given you an idea, haven't I? You're not working hard enough. You're not looking into these areas.

There are a lot of universities in this country that would be delighted to have one of their professors on that committee. And they would be willing to make up the difference in salary to have their professor on the advisory board.

Dr. FEARNSIDES. I will certainly direct Mr. DeLeon to make another tour of the people. He certainly knows the people who know something about the areas of concern to us. And if he can come up with creative approaches like that, we'll certainly give it a try, sir.

Senator FORD. Let me ask you this: Do the regulations already provided by OPSO give an adequate level of safety?

Dr. FEARNSIDES. Do they? We feel that they need improvements, and as I mentioned, we have a notice of proposed rulemaking on LPG ready to come forth in a couple of weeks, and I'd like to ask Mr. Santman or Mr. DeLeon to talk to the specifics about where we think they can be improved.

Mr. DeLEON. I believe Dr. Fearnside made a mistake. It isn't 2 weeks. It's at least 2 months.

Dr. FEARNSIDES. I'm sorry.

Mr. DeLEON. We presently have a set of regulations that are applicable to all hazardous liquids. But we see that there are more stringent regulations needed to be adopted for volatile liquids such as LPG. We

have completed a contract report on this subject, and NTSB has made at least three recommendations to us to adopt more stringent regulations in the pipelines. We have a draft of notice of proposed rule-making broken down into three different parts to tighten up regulations on these pipelines.

And all these notices will be issued this year.

Senator FORD. Well, in the doctor's statement, I quote, "The Department has had adequate resources to carry out an orderly development of the Federal pipeline safety program." If the Department has had adequate resources, then why have over 5 years passed without an updating of the liquefied natural gas regulations?

Dr. FEARNSIDES. I changed that, Mr. Chairman, and said the Department does have adequate resources now. We, in fact, were one of the people—

Senator FORD. You changed it? Go ahead.

Dr. FEARNSIDES. I changed it as I noticed it as I was reading it this morning.

Senator FORD. Well, you give me one thing and say another.

Dr. FEARNSIDES. No; I'm sorry, sir. I did notice it as I started to read it. I didn't realize that the "has had" is an incorrect statement. One of the reasons that we went out for the extra people in fiscal 1978 is the need to develop, the need to get more capability in the regulatory development.

Senator FORD. How many new people are you asking for in the area of regulatory development?

Dr. FEARNSIDES. I believe that we need only one or two people who really know about liquefied natural gas to get us going in that particular area.

Senator FORD. One for that, and eight for Alaska?

Mr. SANTMAN. Senator, I came on board from being its legal counsel to the management side of this operation in November of this past year. In looking over the records and the job to be done and the people that were there, I found that a sizable chunk of the available energies, over the past couple of years, had been directed to dealing with the Alaska liquid pipeline problem. And then, within the last year or so, there had been diversion of the available resources to deal with the Alaskan gas question. In particular the office's participation in the development of the President's decision. That decision was divided up into several parts—I think about 10 parts. Two major parts of it—the safety systems and cost overrun questions—were assigned to the Office of Pipeline Safety. These required a great number of man-hours. And at the present time, we have three persons devoting nearly all of their time to Alaska gas pipeline questions.

These diversions of resources tax our ability to carry out regularly assigned responsibilities. In the day-to-day management of this operation, I see the need to get those people back to the basic tasks.

This is one reason why we are concerned that the Alaska gas requests are included in our budget this year.

Senator FORD. Well, I think you have enough time and enough personnel to anticipate a lot of things instead of reacting to what comes up. Too many times we react instead of act, and I know foresight is a whole lot better than hindsight. But hindsight is always 20-20. Once in awhile you have to anticipate what's coming.

In your reorganization procedure, prior to the Department's reorganization, the director of the Material Transportation Bureau reported to the Secretary. Now, he is one organizational level lower, as I understand it, under the new Research and Special Programs Directorate. How does this structure increase the effectiveness of the MTB director?

Dr. FEARNSIDES. First of all, sir, we haven't noticed any great shortcoming in my being able to talk to the Secretary on Mr. Santman's behalf.

Senator FORD. Would he be able to talk on his own behalf?

Dr. FEARNSIDES. He can.

Senator FORD. OK.

Dr. FEARNSIDES. If the Secretary wants him out there—

Senator FORD. Does he have the ability to get to the Secretary on his own, or does he have to go through you?

Dr. FEARNSIDES. He usually comes through me, sir.

As I mentioned, it was felt that the advantages of having a career person at the head of MTB to give us stability—and let me say, it's the same grade as it was before. So we're looking for people at the same level.

The question is whether it's trading off that direct access to the Secretary against the other organizational advantages he could get by being in a whole organization, as opposed to the partial organization that he had before.

We fully expect, let me say, that there's a good bit of Secretarial attention to this whole area. And as a matter of fact the Deputy Secretary was the acting director for awhile. So there's a good bit—and he took a personal interest in who should be the new director, of course.

But it was felt that the advantages that we could give to the Materials Transportation Bureau by giving them the administrative and technical and legal support right within one organization outweighed the advantages of reporting directly to the Secretary.

Senator FORD. Do you see any threat that the practical aspects of running the OPSO safety program might become secondary to the research functions of the bureau?

Dr. FEARNSIDES. No, sir.

Senator FORD. Is that a capital "n"?

Dr. FEARNSIDES. Capital "n," sir. Absolutely not.

Senator FORD. What steps will you take to assure that MTB will remain an independent regulatory program?

Dr. FEARNSIDES. From the standpoint it hasn't changed in anybody's mind, Mr. Chairman, as far as its independence is concerned.

Whether or not there is a deemphasis because of being connected with research, I'd say that that doesn't stand a very good chance of happening. We have other organizations in this research, and a special programs directorate. The Office of University Programs, the Office of Cargo Security, the Office of Emergency Transportation and the Office of Facilitation of the Transportation Safety Institute, which are not research organizations.

And we just don't have—as a matter of fact, I consider that a very unfortunate name for the organization. But we do in fact have—

Senator FORD. Some people consider a three-martini lunch an unfortunate thing for tax deductions too.

Dr. FEARNSIDES. But there is not any deemphasis, whatsoever. We expect that, by giving the MTB budget support, personnel support, procurement support, we're going to have these people working on what they ought to work on, rather than trying to spend all their time hassling the Office of the Secretary to see if they can get people, or if they can get their budget.

Senator FORD. I am particularly concerned that the safety program remain independent of the theoretical concepts that may be the concern of other programs under the directorate.

Dr. FEARNSIDES. As a matter of fact, sir, we do expect a substantial increase in the capabilities of this, because of its interaction with the R. & D. side. The university research program, an unlikely helpmate, has put out, for several projects in the area of pipeline safety—in particular, welds, and fracture mechanics on the pipes, and the things that really need to be developed to make our pipeline standards more closely related to this structural integrity of pipelines.

We found, in the Alyeska project, that some of our standards were not what they ought to be. And a lot of these standards—these are very technical areas, both hazardous materials operation and pipeline safety. The technical support can in fact be, I think, a great help to the Materials Transportation Bureau.

We haven't downgraded it from a bureau, sir; it's still a bureau—a separate bureau. The Bureau of Motor Carrier Safety, for example, is a bureau, as you know, within the FHA. And we intend to keep it an autonomous and well-functioning organization.

Senator FORD. You said, "in the minds of everybody, it remains the same," but when you make that statement you indicate that you've made at least some paperwork changes. And it might be viewed by others as something different. We'll let that one ride awhile and watch for results.

In your testimony, you discussed emergency plans, offshore pipelines, and pipeline conversion, as "recent significant regulatory accomplishments."

The first two were accomplished in 1976. During 1977, OPSO issued a one-half page amendment in the Federal Register on conversion of pipelines from gas to liquid and liquid to gas. Other than the publication of the discussion paper on LNG, what other regulatory activities are worth noting?

Dr. FEARNSIDES. As far as activities are concerned, sir, I think I should turn this over to the day-to-day managers of this thing.

But as far as the activities are concerned, as Mr. Santman mentioned, we have been developing liquid natural gas notices. We had an advance notice out on that in May 1977—and it's an enormous, technical thing.

We've got LPG work being done, and those are the two highlights that I can think of.

Lee, or Cesar?

Senator FORD. But you only want one more person in the regulatory area. Is that enough?

Dr. FEARNSIDES. If we can get our people out from working on the Alaska natural pipeline stuff, we'll be doing fine. It's only one more person in 1979. I think we have one or two of our 1978 spaces, that would go over to the regulatory area—professionals that go toward the regulatory area.

And you've got to recognize that, during the work that we did on Alaska, I think we estimated that about 20 to 25 percent of our headquarters' people here in Washington were involved in Alaskan matters. So it made quite an impact in our regulatory program for 1976 and 1977.

In response to your question of what other regulatory actions we've taken, there are about five or six other smaller pieces that are not as important—regulations that we have issued during those 2 years.

Senator FORD. Would you submit those for the record?

Mr. DeLEON. Yes, sir, I'll do that.

[The following information was subsequently received for the record:]

LIST OF AMENDMENTS ISSUED IN 1976, 1977, AND 1978 WITH RESPECT TO THE
FEDERAL GAS (PART 192) AND LIQUID (PART 195) PIPELINE SAFETY STANDARDS
AND PENDING NOTICES OF PROPOSED RULEMAKING

AMENDMENTS

1. Amdt. 192-22 and Amdt. 195-9, Incorporation by Reference, 41 FR 13590, Mar. 31, 1976.
2. Amdt. 192-23, Protecting Cast-Iron Pipelines, 41 FR 13588, Mar. 31, 1976.
3. Amdt. 192-24, Emergency Plans, 41 FR 13586, Mar. 31, 1976.
4. Amdt. 192-25, Caulked Bell and Spigot Joints, 41 FR 23679, June 11, 1976.
5. Amdt. 192-26 and Amdt. 195-10, Bending Limitations, 41 FR 26016, June 24, 1976.
6. Amdt. 195-11, Offshore Pipeline Facilities, 41 FR 34035, Aug. 12, 1976.
7. Amdt. 192-27, Offshore Pipeline Facilities, 41 FR 34598, Aug. 16, 1976.
8. Amdt. 192-27A, Offshore Pipeline Facilities, 41 FR 47252, Oct. 28, 1976.
9. Amdt. 192-20A, Line Markers for Mains and Transmission Lines, 41 FR 56807, Dec. 30, 1976.
10. Amdt. 192-28, Corrosion Control for Metal Alloy Fittings in Plastic Pipelines, 42 FR 35653, July 11, 1977.
11. Amdt. 192-29 and Amdt. 195-12, Longitudinal Seams in Pipe Bends, 42 FR 42865, Aug. 25, 1977.
12. Amdt. 192-30, Conversion of Existing Pipelines to Gas Service, 42 FR 60146, Nov. 25, 1977.
13. Amdt. 195-13, Conversion of Existing Pipelines to Liquid Service, 43 FR 6786, Feb. 16, 1978.

PENDING NOTICES OF PROPOSED RULEMAKING

1. Notice 76-3 (ANPRM), Pipeline Occupational Safety and Health, 41 FR 56834, Dec. 30, 1976.
2. Notice 77-1, Design of Plastic Pipelines, 42 FR 8386, Feb. 10, 1977.
3. Notice 77-4 (ANPRM), LNG Facilities, Federal Safety Standards, 42 FR 20776, Apr. 21 1977.
4. Notice 77-6, Seams on Adjacent Pipe Lengths, 42 FR 48900, Sept. 26, 1977.
5. Notice 77-7, Qualification and Design of Steel Pipe, 42 FR 62397, Dec. 12, 1977.

Mr. SANTMAN. To characterize the LNG document as a "discussion paper" is not accurate. Although it certainly did stimulate a lot of discussion, it was with more regulatory intent than merely stimulating discussion.

It is an advance notice of proposed rulemaking, and it has stimulated some—I believe 200 sets of public comments.

Senator FORD. How advanced?

Mr. SANTMAN. It would advance the level of safety now provided by the NFPA 59-A code sufficiently enough that there are a lot of people in the industry making very strenuous assertions that we're going too far with it.

It's "advanced," in the sense that it will now evolve into a formal notice of proposed rulemaking. It was not a classic "advance notice," in that it was not cast in vague terms of "let's talk about this thing." It had specifics. It was written in terms of explicit requirements. It was really a draft regulation.

Senator FORD. When will this come about?

Mr. SANTMAN. The comment period closed the end of the last calendar year, 1977, and we're in the midst of plowing through the 200 sets of comments. We're committed to an issuance of a formal notice within this calendar year.

A precise date, I can't give; but within this calendar year. But the point is that in its present form it's more than just something thrown out to "stimulate discussion."

Senator FORD. Are you stating, then, that it will be this year?

Mr. SANTMAN. Yes, there will be a notice this calendar year.

Dr. FEARNSIDES. It stimulated a good bit of controversy, Mr. Chairman.

Senator FORD. Maybe you're going to have some input. You ought to pay attention to what you get.

In your testimony, you referred to a memorandum of understanding between the Department of the Interior, regarding offshore pipelines on the Outer Continental Shelf. Following the execution of the memo, did the Department of the Interior stop prescribing safety standards as a condition for granting an Outer Continental Shelf right-of-way?

Dr. FEARNSIDES. My understanding is that there is some problem with one of the folks in New Orleans, but outside of that I think the cooperation has been pretty good.

Cesar?

Mr. DELEON. We have been getting pretty good cooperation. The New Orleans office of the Department of the Interior still has a way of getting their views, somehow—getting the companies to go along with their views.

We are working on trying to smooth out our relationship with DOI in the implementation of MOU, and I'm sure that we will.

Senator FORD. You are saying that Interior has a great deal of clout with the companies, and you have very little?

Mr. DELEON. Well, sir, they issue a right-of-way on a pipeline on the offshore, and—

Dr. FEARNSIDES. The answer is "Yes."

Dr. DELEON [continuing]. And the answer is "Yes, sir," because if Interior doesn't issue them a right-of-way they can't get the pipeline built.

Senator FORD. Since you obviously do not have the field personnel to do a thorough inspection of all interstate operations, and oversee the State programs, how do you determine which operators and which State programs should get priority attention?

Dr. FEARNSIDES. We have a set of guidelines that go out to the States, and we have our training programs that train the State inspectors as to how to select the pipeline operators—what the criteria are you will use for making your inspection, as well as guidelines for how to make that inspection.

Senator FORD. How do you then go back and follow up?

Dr. FEARNSIDES. We have inspected each of the States, once; and many of the States, twice, in the last calendar year. And we go out and make sure, when we inspect them and accompany them on their inspection of operators making sure how they do it, and evaluating what they do. And that, of course, is one of the criteria for determining how good their program is.

Senator FORD. Have we been lucky in the area of pipeline safety, or can we expect the relatively low level of injuries and death to stay at the same level?

Dr. FEARNSIDES. I think, if we can get the corrosion—enforcement of the new corrosion regulations out there, that we'll even do better than we've done before.

There is, of course, a good bit of interest in industry not to have these leaks.

Senator FORD. I was wondering if you'd ever get around to giving industry a little credit for doing a good job on their safety program.

Dr. FEARNSIDES. That's right, sir. And so I would say that things—that there's no big increase that seems to be coming down the line, especially if we keep our administrative nose to the grindstone.

Senator FORD. So you will give industry a little credit for doing a good job with their safety program?

Dr. FEARNSIDES. Yes, sir.

Senator FORD. We're about to run out of time. I've enjoyed the discussions with all three of you this morning.

It appears to me that the Department is placing a very high priority on a proposed pipeline in Alaska, which in my opinion—and of course I have been known to be wrong—may not pose the type of safety risk of existing pipelines in places like the District of Columbia, and other areas of high population density.

That was the point I was alluding to, earlier: that if you have a problem in Alaska, or up through one of the provinces where it's sparsely settled, and we're sitting right in here in a metropolitan or, urban area, over a bad system, how important is it to have a safety program here compared to what's being built up there?

It seems like you've spent an awful lot of your time, 25 percent of headquarters' personnel, over a period of time, on the Alaska pipeline. And you have found the District of Columbia was not in compliance, and yet—you had to force them to hire one more employee.

Now, I'm interested in getting the gas down through Canada into the United States. As you stated, that's 10 percent of all the natural gas that we use. It's my understanding that it is going to cost us \$2.20 an mcf just for transportation, just for the filtering. So, \$2.20, and then you buy the gas after it gets here. We won't even give the American producer \$1.75, and give him a little phased-in deregulation over a period of time.

I've been studying the situation, and I want you to know that the Department can expect to receive followup questions, and I would appreciate, Doctor, and all three of you, seeing that the responses are returned in time to be placed in our hearing record.

Senator FORD. As I understood, the previous questions that we submitted to you will be here this week?

Dr. FEARNSIDES. By the end of the week; yes, sir.

Senator Ford. You can make some corrections, and other people can make some corrections, but I would be very hopeful that they would be here by Friday.

Thank you for your time this morning, gentlemen. We look forward to seeing you again soon, and I want you to know that I'll be inquisitive as to how quickly you get into a positive position, instead of a reactive position.

Dr. FEARNSIDES. Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF DR. JOHN J. FEARNSIDES, ACTING DIRECTOR, RESEARCH AND SPECIAL PROGRAMS DIRECTORATE, DEPARTMENT OF TRANSPORTATION

Mr. Chairman and Members of the Committee: I am pleased to be before your Committee to discuss the Department of Transportation's pipeline safety program, particularly as it relates to activities since October 11, 1976, the effective date of the last authorization legislation under the Natural Gas Pipeline Safety Act of 1968. The authority under that legislation to appropriate funds expires at the close of this fiscal year. We are before this Committee seeking legislation to authorize additional appropriations in support of the continuing efforts of DOT and the Administration to ensure the safe movement in commerce of hazardous gases and liquids by pipeline.

While the Department has had adequate resources to carry out an orderly development of the Federal pipeline safety program, the Department will be requesting additional resources to increase the program's effectiveness and to support pipeline safety requirements associated with the mammoth undertaking to move Alaska natural gas to the lower 48 States.

Although the Department's pipeline safety functions continue to be carried out by the Materials Transportation Bureau (MTB) through its Office of Pipeline Safety Operations (OPSO), a recent Departmental reorganization has placed MTB within the structure of the newly created Research and Special Programs Directorate. Like the Coast Guard, FAA, FRA, etc., the new Directorate has the status of an operating administration. In addition to the MTB, some of the more important elements of this new administration related to the missions of OPSO are the Transportation Systems Center in Cambridge, Massachusetts, the Transportation Safety Institute in Oklahoma City, and the Office of University Research.

The Transportation Systems Center provides a capability to identify and resolve national transportation problems which require advanced and coordinated systems and technological research and development. At the Safety Institute, courses are developed and training is conducted with respect to safety and security for all modes of transportation.

The missions of the Office of University Research are to stimulate university research activities with respect to transportation issues, to conduct multimodal and interdisciplinary research with educational institutions, using funds appropriated for that purpose, and to disseminate the results of research to elements of the Department.

The stature of the Directorate as an administration and the co-location of the research and training capabilities with the pipeline regulation and enforcement functions in this administration are viewed by the Department as benefiting the effectiveness of the pipeline safety program.

Resources for the Department's pipeline safety program are authorized only under the Natural Gas Pipeline Safety Act of 1968. However, our responsibility for the safety regulation of all pipelines and associated storage facilities used for transporting hazardous gases and liquids in commerce is derived from several laws in addition to that Act. These include the Mineral Leasing Act of 1920, as amended (30 U.S.C. 185); the Hazardous Materials Transportation Act of 1974 (49 U.S.C. 1801 *et seq.*); the Transportation of Explosives Act (18 U.S.C. 831-835); the Deepwater Port Act of 1974 (33 U.S.C. 1520(a)); and the Alaska Natural Gas Transportation Act of 1976 (15 U.S.C. 719). Department activities during the last two years under these laws demonstrate the Department's commitment to pipeline safety.

Since the Federal gas pipeline safety standards were first adopted in August 1970, they have been amended 30 times; and the liquid standards which were adopted in September 1969, have been amended 13 times.

A number of these amendments which recently went into effect represent significant strides in the regulation of pipeline safety. For example, as of October 1, 1976, operators of gas pipelines are required to: prepare and execute more detailed emergency plans covering topics such as communication with fire and police officials, proper response to notice of an emergency, having personnel and tools available at the scene, system shutdown, and warning and protecting people. In addition, educational programs are required to enable the public to recognize and report a gas emergency.

Another significant accomplishment involves offshore pipelines. In territorial waters, the safety of these lines is regulated by the Department, while lines on the outer continental shelf (OCS) are regulated by the Department in cooperation with the Department of the Interior. We are pleased to report that in May 1976, the two Departments signed a memorandum of understanding establishing a division of OCS regulatory responsibilities. Under this memorandum of understanding, the Department exclusively prescribes and enforces pipeline safety standards for those OCS pipelines lying between production facilities and the shore. The Department of the Interior regulates the pipelines running between these production facilities and the wells.

Following completion of the memorandum of understanding, the Department amended both its gas and liquid pipeline safety regulations, effective November 1, 1976. The amendments made the standards more effective for offshore pipelines in areas such as pipe design, buried depth, corrosion control, and repairs.

Regulations for the conversion of existing pipelines to gas or liquid service represents a third important achievement. Recent amendments permit liquid lines to be converted to gas transportation, or vice versa, simply by following appropriate conversion procedures and operation and maintenance requirements. The procedures are designed to enable recognition and elimination of potential operating hazards. In the face of changing energy supplies and transportation patterns, these rule changes make it more desirable for industry to use existing pipelines to meet new demands rather than to construct new lines.

In addition, the Department has promulgated several other rule changes and has several pipeline safety rulemaking proceedings pending final action. By far the most significant of these is a comprehensive set of proposed changes to the Department's LNG safety standards. Extensive comments were received on an advance notice of proposed rulemaking on LNG safety issued in April 1977 by the Office of Pipeline Safety Operations. New rules are contemplated to deal with the problems of selecting a safe site, protection against thermal radiation and gas dispersion and guarding against the potential for a catastrophic spill. Subject to cooperation with the U.S. Coast Guard under the provisions of a recently executed memorandum of understanding regarding waterfront LNG facilities, we expect to issue a notice of proposed rulemaking on this subject later this year. Other rulemaking projects now underway will enhance the Federal standards in light of changing technology and industry practices. Based on a recent contract study, new standards are being developed for transporting LPG and other volatile liquids by pipeline.

We also expect to issue a notice of proposed rulemaking qualifying personnel and procedures for joining of plastic pipe, which has been a factor in several recent accidents, as well as the subject of several National Transportation Safety Board recommendations. At the same time, we are continuing a structured review to evaluate our existing regulations, particularly in the areas of corrosion control and welding of steel pipe, to determine whether further changes are needed to correct weaknesses or unnecessary requirements.

To support and guide us in regulatory activities in the past two years, we have completed or have underway 14 contract studies covering such subjects as: technology for handling and storing LNG; transporting highly volatile, toxic, or corrosive liquids (includes LPG); offshore pipeline safety; environmentally-induced cracking in pipelines; outside force damage; and evaluation of the welding on the trans-Alaska crude oil pipeline.

The information being developed by these studies is being used to assess the need for or to develop new or revised standards for the safety of the Nation's pipeline systems. The information and knowledge gained is also used to provide direction for the other areas of our pipeline safety program and is made available to the pipeline operators to assist them in their safety programs.

We plan to continue into the future with R&D efforts in the areas where our experience and completed studies indicate a need. These include development in areas such as: a means for predicting LNG vapor cloud dispersion; technology

for in-place evaluation of pipelines; procedures for effectively monitoring pipeline corrosion control in congested areas; and continuing research into offshore pipeline technology.

An area of continuing concern to our Department, but one which we believe could be better handled through means other than Federal regulation, is the serious damage to buried gas pipelines resulting from outside forces, particularly from excavation work and other underground construction performed by third parties. These activities continue to be the cause of the majority of gas pipeline failure incidents and is also the number one cause of liquid pipeline accidents as well.

Because the pipeline operators, over which DOT has jurisdiction, seldom are responsible for the damage to their facilities resulting from such activities, DOT has looked to the States for solutions to the problem. Since 1972, we have encouraged States to remedy the serious problem of outside force damage through State legislation. In that regard, the Department's safety regulations provide an exception to pipeline marking requirements where a program for preventing interference with underground pipelines is established by law. If such a program is not in place, line markers must be installed over each buried main and transmission line wherever necessary to identify the location of such lines.

Additionally, in January 1977, OPSO drafted and succeeded in having included in the Council of State Governments' annual publication on suggested State legislation, a "Model Underground Utility Damage Prevention Act." The Secretary contacted each of the State Governors and the Mayor of the District of Columbia indicating his support of the model legislation and encouraging their initiative toward enactment of comparable State statutes. Several States have very active programs for encouraging voluntary One-Call Systems such as those fostered by the American Public Works Association's Utility Location and Coordination Councils (ULCC). This latter effort has also received strong support from the NTSB. We joined NTSB in encouraging and supporting the ULCC activities. However, we recognize that State laws may be needed in areas where such councils or voluntary programs are not active, or in instances where a utility or underground line operator chooses not to join in such a voluntary cooperative program.

To obtain current factual information about the effectiveness of pipeline damage prevention programs, we executed a study to the Illinois Institute of Technology Research Institute of Chicago, Illinois, in September 1976. That study which has just been completed included analysis and evaluation of: State and local laws directed at excavation damage prevention; cooperative groups' efforts such as the underground coordinating councils; data on individual gas failures and liquid pipeline accidents; marking regulations and their effectiveness; research and technical programs; excavation damage prevention activities of other Federal, State, and local governments; and preparation of recommendations for future research, regulations, or other actions.

At the previous oversight hearings two years ago, we reported the establishment of four OPSO regional field offices, in San Francisco, Atlanta, Kansas City, and Washington, D.C., in addition to the existing regional field office in Houston. Since that time, the operational effectiveness of these field offices has been enhanced through the development of guidelines for the selection of pipeline system operators to which compliance and enforcement attention can be directed most effectively. Training of the OPSO regional and State personnel in specific pipeline technology areas, surveillance and enforcement, and accident investigation techniques to assure compliance with State and Federal pipeline regulations continues. The OPSO inspection program establishes selection of operators for inspections on an annual basis and takes into consideration the types of pipeline systems having the most noncompliances and potential problems, travel schedules, and the availability of resources at both the Federal and State commission level. During 1976 and 1977, OPSO personnel conducted 250 natural gas pipeline and 68 liquid pipeline inspections.

During 1976 and 1977, the Department expended and contracted for considerable resources with respect to activities on the trans-Alaska crude oil pipeline. It was during this time that the integrity of welds on his 800-mile pipeline system became the subject of public interest and extensive Congressional inquiry. While the Department effectively responded to the concerns that were raised, to do so required a shifting of our resources to the detriment of other pipeline safety functions. OPSO, alone, devoted 702 person days during 1976 and 1977 to on-site inspection of construction of the crude oil pipeline. These activities resulted in about a 40 percent reduction in field force inspection time which would have

been devoted to pipeline systems in the lower 48 States. The resources expended by OPSO for headquarters' activities and contract studies with respect to the weld problem resulted in a further diversion of our attention from other pipeline safety matters.

Pursuant to the memorandum of understanding with the Department of the Interior referred to earlier, establishing a division of outer continental shelf regulatory responsibilities, the DOT initiated inspections of offshore pipelines in 1977 through its regional offices and will accelerate those inspections in the future. Significant effort has also been devoted to monitoring and guiding the State commissions in development of State pipeline compliance and enforcement programs. Each State agency has been monitored at least once and many States twice a year to assure the conduct of an adequate pipeline safety program. This activity includes monitoring the conduct of State-performed inspections of operators in the field.

Operators found in noncompliance with Federal pipeline safety regulations are subject to civil and/or criminal penalties depending upon the nature of the commodity being transported. Although penalty action is an adequate deterrence to most noncompliance, this is not always the case, particularly in the case of small municipalities that own and operate natural gas distribution systems. Our inspections of those systems have revealed that many of these systems, most of which are located in the southern and southwestern parts of the United States, fail to meet minimum safety standards due to serious and widespread physical deterioration. When our inspection reveals that a municipal gas system does not comply with Federal gas pipeline safety regulations local officials are advised of the town's liability for a civil penalty. In many cases these localities are not financially able to pay a penalty, nor do they have the resources to repair or replace their unsafe pipelines.

To find solutions to this serious problem, the Department has sought the assistance of the Department of Commerce and Housing and Urban Development. Commerce, through the Economic Development Administration (EDA), carries out the operative provisions of the Public Works and Economic Development Act of 1965. As we perceive the purpose of that Act, it is to help restore, by way of direct grants to State and local communities, the economic health of areas burdened with unemployment and low family income. It appears that such EDA-administered grants could well serve to assist small municipalities that own and operate unsafe gas distribution systems. The appropriateness of such EDA assistance rests on the recognition that the safety of life and property and the continuance of job opportunities are clearly in jeopardy unless gas leakage from deteriorated systems is corrected.

The Department of Housing and Urban Development, through its Community Development Block Grant Program, makes discretionary grants under Title I of the Housing and Community Development Act of 1974 in order to support community development activities directed toward the elimination of conditions which are detrimental to health, safety and public welfare. The grant program is also meant to improve the quantity and quality of community services for persons of low and moderate income for the development of viable urban communities.

Urban communities with deteriorated gas distribution systems which have made application for HUD discretionary grants in the past in order to repair or replace their pipelines have generally been unsuccessful. This seems to be due principally to one category in HUD's selection criteria in which serious and imminent threats are defined. The definitions were apparently drafted with water contamination in mind.

We believe that in applying these definitions, HUD could well consider factors which more closely recognize the nature and function of a community operated gas pipeline distribution system when an application concerns such a system. In this way, municipal gas applicants would be on an equal footing with other discretionary grant applicants.

On February 15, 1978, after considerable advance staff level contact between the Departments, Secretary Adams formally proposed to Secretary Kreps and Secretary Harris interdepartmental cooperation to achieve the benefits to pipeline safety afforded by the grant programs they administer.

In essence, we are trying to help those small municipally owned gas systems with inadequate resources that we regulate to find the resources necessary to make their systems safer.

As you know, the Natural Gas Pipeline Safety Act of 1968 provides for the assumption by State agencies of pipeline safety and enforcement responsibilities over intrastate gas pipeline facilities in accordance with that Act and State law. In this regard, I am pleased to report that in 1976, one hundred percent State participation was achieved for the first time since the inception of the Cooperative Federal/State gas pipeline safety program. Of the 53 agencies that participated in the program in 1977 (two State agencies in Florida were certified as well as Puerto Rico and the District of Columbia) 46 State agencies were certified under Section 5(a) of the Act and 7 State agencies entered into 5(b) agreements. This participation clearly indicates the States' interest in pipeline safety and their willingness to share in the responsibility of this cooperative Federal/State gas pipeline safety effort.

State expenditures for gas pipeline safety activities have also continued to increase since the passage of the Act. For example, States have expended about \$4.95 million in 1977 as compared to \$3.58 million in 1975. By 1982, the States have estimated that their expenditures for pipeline safety will be well over \$8 million. Federal grant-in-aid funds have provided resources to establish and expand gas pipeline safety activities at the State level. To defray up to 50% of a State's expenses, a total of \$2.3 million in grant-in-aid funds was allocated to 47 State agencies that requested financial assistance in 1977. This represents an increase of six States over those participating in the 1975 grant program. The funds have been used by the States to finance personnel, equipment, training, and other activities related to the gas pipeline safety program.

Another indication of the progress of the pipeline safety program at the State level is the substantial increase in person-years devoted to pipeline safety. Since the establishment of the pipeline safety program, the number of State personnel devoted to pipeline safety increased over 400 percent. In the last two years there has been an increase from 185 to 197 in State person-years involved in pipeline safety. While the number of State person-years was expanding, the technical expertise of the State personnel was being improved. The gas pipeline safety training program for State personnel, conducted in cooperation with the Transportation Safety Institute in Oklahoma City, continued with a high degree of success in 1976 and 1977. The training program for State personnel was expanded with the introduction of several new 40-hour technical courses. During 1976 and 1977 these courses were attended 322 times by State agency gas safety personnel.

The 2-Day Industry Seminar program, also conducted in cooperation with the Transportation Safety Institute, was expanded in 1976 and 1977 and conducted 41 seminars involving 2,744 industry personnel. These 2-Day Industry Seminars were scheduled in cooperation with State agencies, and held at various locations throughout the Nation. The technical instruction provided an overview of the safety requirements for gas pipeline systems and was directed toward the small industry operator with a basic level of pipeline safety understanding. Almost every State has conducted an Industry Seminar in cooperation with OPSO.

The States have also made considerable progress in developing programs for enforcing the Federal safety standards in their respective States. In 1977, State inspectors conducted 14,303 inspections of 2,885 gas operators to determine if their gas facilities were in compliance with safety regulations. As a result of these inspections over 4200 deficiencies have been corrected in 1977 alone. These inspections have significantly improved the level of safety of our Nation's gas facilities. To achieve this level of pipeline safety without State participation would have required a substantial increase in Federal dollars and technical positions.

To assure the proper development of a State pipeline safety program, the OPSO has developed and distributed a procedural manual for the proper accounting and documentation of State expenditures related to the grant-in-aid program. In addition, OPSO is presently developing a manual to provide guidance to State agencies in conducting a gas pipeline safety program. Much of the material in the manual was previously provided to State agencies through correspondence, notices, and other means, and for the most part, the manual represents a compilation of that information. This draft manual will be distributed to the State agencies within the next three months.

In addition to the extensive pipeline safety activities conducted by the Department with respect to the trans-Alaskan crude oil pipeline, during the last two years, the Department has and will continue to carry out its pipeline safety responsibilities associated with the almost 5000 mile pipeline system that will transport Alaska natural gas to the lower 48 States.

The Department's responsibilities in this area stem from the Alaska Natural Gas Transportation Act of 1976, and the President's Decision and Report to Congress on the Alaska Natural Gas Transportation System which was approved by Congress on November 2, 1977, and signed into law by the President on November 8, 1977.

Some of our past activities under these authorities are worth mentioning. The Department provided extensive comments to the Federal Power Commission (FPC) on the FPC Administrative Law Judge's Alaska Gas Decision. We joined in the Federal interagency effort to review and comment on the FPC Recommendation to the President and took a leading role in two of the 10 specific issue reports that went to the President—those on Safety and Design and on Construction Delay and Cost Overruns issues. We also provided technical input for the President's Decision and Report to Congress on a selection of an Alaska natural gas transportation system and drafted proposed terms and conditions and planning guidelines for the Federal Inspector activities under the ANGTA. Since November, we have held several meetings with other Federal agency officials and our Canadian counterparts and accomplished a considerable amount of staff work to carry out the joint responsibilities for testing and evaluating the pipe design for a Canadian section of the pipeline in accordance with the agreement between the U.S. and Canada on principles for the northern natural gas pipeline. A statement of the U.S. views in this matter was forwarded to Canadian officials on February 13.

The operator of the Alaska natural gas pipeline system has already begun many preconstruction activities. During 1978, the operator will be conducting environmental studies, developing preliminary system design, conducting a geotechnical program to determine the presence of rock and the stability of soil and permafrost, and conducting pipeline burst tests.

The Department plans to monitor the preconstruction functions as they are conducted by the operator, monitor the design criteria and test procedures as they are established, and appraise the results of such efforts. The monitoring will continue throughout the life of the project to mid-1983 with shifting emphasis at various stages.

The DOT will exercise its responsibilities through a headquarters staff and a field force. An office will be established, initially located in Washington, to review the engineering design work and later relocated to Alaska to monitor the construction and operation of the Alaska portion of the pipeline system. Consultants will be employed to advise DOT in areas where there is insufficient inhouse capability. A contractor will be engaged to review design work and assist in the direct monitoring of the construction and initial operation of the pipeline.

The DOT's review and monitoring efforts will continue from fiscal year 1978 to about the middle of 1983. Peak cost and staffing is expected to occur in 1981 or 1982.

The assumptions and factors which we used in deriving our monitoring estimates are very similar to those used by the Department of the Interior for its efforts on the trans-Alaska crude oil pipeline. We have a high degree of confidence in our projections, but expect that unforeseen events and changing conditions will require us to periodically update our plans and programs. We are prepared to do so, as necessary. Of great importance is the necessity to maintain, which we were unable to do in the case of the trans-Alaska crude oil pipeline, our capacity to effectively carry out all of the Department's pipeline safety functions while fulfilling our responsibilities with respect to the Alaska gas line.

In conclusion, Mr. Chairman, I feel that the pipeline safety program that we have pursued and the direction we plan for the future will provide a high level of safety for the public and carry out the full intent of the laws that direct our program. This concludes my prepared statement and I will be happy to answer any questions you or the members wish to ask.

Senator FORD. The hearing is adjourned.

[Whereupon, at 11:40 a.m., the hearing was adjourned, subject to the call of the Chair.]

[The following information was subsequently received for the record.]

DEPARTMENT OF TRANSPORTATION,
RESEARCH AND SPECIAL PROGRAMS DIRECTORATE,
Washington, D.C., March 3, 1978.

Hon. WENDEL H. FORD,

Chairman, Subcommittee on Consumer, Committee on Commerce, Science and Transportation, U.S. Senate, Washington, D.C.

DEAR SENATOR FORD: I am enclosing answers to questions that you made reference to during the hearings on February 27, 1978.

Sincerely,

JOHN J. FEARNSIDES,
Acting Director.

Enclosures.

I. REGULATIONS

Question 1. In the 1975 hearings, OPSO provided the Senate Commerce Committee with its projected regulatory plan.

Question 1(a). What is the status of that plan (what fiscal years were these regulatory changes issued or are they now expected to be issued)?

Answer. The following shows the status of the regulatory projects included in the plan submitted to the Committee in June 1975:

Project No.	Short title	Status
5-1L	Revise parts 192 and 195 reporting requirements	Pending.
6-1L	Revise part 195 re highly volatile liquids (LPG)	Pending.
7-1GL	Revise pipe bending limitations, gas and liquid	Final rules issued (41 FR 26016, June 14, 1976).
9-1G	Clarify pressure testing under sec. 192.619	Pending.
12-1G	Establish rulemaking procedures	Final rules issued (40 FR 31768, July 29, 1975).
16-1G	Revise design formula for steel pipe	Pending.
17-1G	Yield strength of steel pipe	Pending.
19-1L	Welders under sec. 9 of the ASME boiler code	Pending.
49-3G	Revise definition of gas "gathering line"	Pending.
50-3G	Require overpressure protection for distribution systems	NPRM to be withdrawn.
52-3G	Reference industry specification for high-test wrought welding fitting	Pending.
53-3G	Revise corrosion control requirement for short metal pipe	Final rules issued (42 FR 35653, July 11, 1977).
55-3G	Delete unit stress requirements for components in sec. 192.143	Pending.
57-61-64L	Make part 195 consistent with part 192	Pending.
63-4G	Change annual report by gas distribution operators	Combined with project 5-1L.
64-4G	Change wording in sec. 192.167(b)	Pending.
68-4G	Reference specification for steel butt welding, steel screw fittings, and pipe nipples	Pending.
69-4G	Telemetering of gas pressure information	ANPRM to be withdrawn.
72-4G	Revise part 192 re offshore pipelines	Final rules issued (41 FR 34598, Aug. 16, 1976).
74-4G	"Avonseal" and similar sealing processes	Final rules issued (41 FR 23679, June 11, 1976).
75-4L	Disturbing cast iron pipe	Final rules issued (41 FR 13588, Mar. 31, 1976).
76-4	Gas emergency plans	Final rules issued (41 FR 13586, Mar. 31, 1976).
77-4G	Amend part 192 re aluminum pipe	Pending.
82-4L	Hydrostatic testing of liquid pipe	Pending.
84-5G	Using LPG as a test medium	Pending.
85-5GL	Amend reporting requirements for Mineral Leasing Act	Combined with project 5-1L.
86-5L	Amend part 195 re offshore pipelines	Final rules issued (41 FR 34035, Aug. 12, 1976).
87-5G	Establish Federal rules for LNG	ANPRM issued (42 FR 20776, Apr. 21, 1977).
88-5G	Update reference specifications	Final rules issued (41 FR 13590, Mar. 31, 1976).
89-5	Civil penalty procedures	Pending.
90-5GL	Standards for arctic pipelines	Pending.
91-5G	Replace referenced specification with performance standards	Pending.
92-5G	Change plastic pipe requirements in secs. 192.121 and 192.123	NPRM issued (42 FR 8386, Feb. 10, 1977).
94-5	Amend sec. 195.228 re welding	Pending.

Question 1(b). Current regulatory plan?

Answer. In conformance with the Secretary's statement titled, "Policy and Procedures for Simplification, Analysis, and Review of Regulations," issued January 31, 1978 (copy attached), the Materials Transportation Bureau is preparing its first semiannual report of proposed and final regulations that are projected for

publication during the succeeding 12 months. The report, which is to be completed by March 31, 1978, will constitute the Bureau's "current regulatory plan," and we will furnish the Committee a copy. Of the projects listed above, we anticipated that the report will include proposals regarding LPG and LNG facilities. (Projs. 6-1L, 87-5G), reporting requirement (Proj. 5-1L), and hydrostatic testing (Proj. 82-4L); and final rules on plastic pipe (Proj. 92-5G). Projects shown as "pending" which are not included in the report will be deferred for possible inclusion in the next report depending on assigned priorities. The first report also may include regulatory projects which were begun since 1975 and are not included in the above listing.

Question 2. Does OPSO have a "system" for identifying needed regulatory changes?

Answer. OPSO's "system" for identifying needed regulatory changes involves (1) determining the number and causes of accidents which are occurring, (2) predicting safety problems which pose a significant and credible risk to the public, and (3) recognizing weaknesses, inadequacies, or unnecessary burdens in the existing regulations.

Question 2(a). What is that system?

Answer. The "system" is based on information provided by OPSO's accident and incident reports, statistical analyses, compliance investigations, NTSB reports, petitions for rule change or waiver, and contacts with industry associations and representatives and interested members of the public.

Question 2(b). Is OPSO able to keep up with all of the needed changes?

Answer. While OPSO has not been able to implement all the needed changes, it has been able to meet the most pressing regulatory needs.

Question 2(c). How are priorities assigned to pending regulatory projects?

Answer. Priorities are assigned, first, to changes needed to control recurring or predictable accidents, and, secondly, to changes intended to improve the effectiveness of existing regulations.

Question 3. Are there any hazardous material pipelines for which regulations have not been issued?

Question 3(a). If so, what are they?

Question 3(b). How many such operators, miles of such pipelines?

Question 3(c). Why haven't regulations been issued?

Answer. The safety standards for liquid pipelines (49 CFR Part 195) are applicable to the transportation of all liquid hazardous materials transported in interstate and foreign commerce. The safety standards for gas pipelines (49 CFR Part 192) are likewise applicable to the transportation of all natural gas, flammable gas, or gas which is toxic or corrosive. The existing safety standards are specifically directed toward hazardous liquids and gases that are most often transported by pipe and thereby have greater public exposure, i.e., crude oil, refined products, and natural gas. If a safety problem is discovered with the transportation of other hazardous materials by pipeline, more specific regulations will be developed for that commodity. This is the case with the transportation of more volatile liquids, such as liquefied petroleum gas (LPG) and anhydrous ammonia, where accident data gathered by the Department indicates that death, injury, and property damage is greater for the volumes transported than for other liquid materials. The Department is presently developing pipeline safety regulations that will more directly affect the safety of the approximately 18,000 miles of pipelines operated by approximately 30 carriers transporting these more volatile liquids. These Federal regulations have not yet been issued because of the need to fully develop an adequate technical basis and because available rule-making resources have concentrated on problems where the necessary information to fashion solutions had been completely developed.

Question 4. When can we expect comprehensive Federal regulations dealing with liquefied natural gas facilities?

Answer. Since 1972, the Department has regulated the safety of LNG facilities through incorporation by reference of the National Fire Protection Association Standard No. 59A. However, we have recognized a need for independently developed Federal standards.

Following a research study on LNG safety completed for the Department in 1974, and another in 1976, the Office of Pipeline Safety Operations issued an Advance Notice of Proposed Rulemaking setting forth a comprehensive set of draft standards in April 1977. Because of the voluminous comments received on this notice and the many serious technical and economic issues involved, we expect it will take several more months to complete a Notice of Proposed Rulemaking.

Normally a final rule can be issued within one year after issuance of a Notice of Proposed Rulemaking.

Question 4(a). Why has this taken so long?

Answer. The time involved in processing this rulemaking proceeding is attributable to the many other priorities to which OPSO has devoted its attention, among which are offshore pipelines, the trans-Alaska crude oil pipeline, and the Alaska natural gas project.

Question 4(b). What is OPSO doing to expedite these standards?

Answer. OPSO expects to expedite the process by hiring an engineering consultant to work full time on the development of LNG safety standards.

Question 4(c). Will siting be given priority in publishing the standards?

Answer. To the extent that it is feasible to do so, we intend to separately publish the proposed site-related requirements of the comprehensive standards in order to place them in effect as early as possible. However, we must keep in mind that many of the standards are interrelated, and separate publication could hinder the development of meaningful comments.

Question 4(d). How many facilities plants and storage currently exist?

Answer. In the United States, LNG pipeline facilities of all types and sizes expected to be operational during 1978, total 113. Based on information from the *Gas and Pipeline Journal*, November 1977, a breakdown is shown in the following table:

Type LNG facility	Number		Storage (thousand barrels)
	Facilities	Tanks	
Peak shaving with liquefaction.....	52	69	16,380
Peak shaving satellites.....	23	24	2,520
Small peak shaving satellites.....	32	48	55
Import/receiving terminals.....	5	12	6,070
Export/shipping terminals.....	1	3	675
Total.....	113	156	25,700

A number of small facilities in the United States which are not pipeline related, and about 50 relatively large facilities in foreign nations also currently exist.

Question 4(e). How many more are expected to be constructed/designed before new standards become effective?

Answer. Plans for LNG facilities are not filed with OPSO. Therefore, we do not have firsthand information for accurately projecting LNG construction.

However, considering the peak shaving facilities under or nearly ready for construction, the new LNG facilities recently approved or likely to be approved soon by the Department of Energy, we expect 6 or 7 major facilities will be in the design, procurement, or construction stage before new standards become effective.

Question 4(f). How many more are expected after the standards become effective?

Answer. Recently, the market for LNG peak shaving facilities has become saturated. This is primarily due to three factors.

Curtailments in pipeline gas beginning about 1968 resulted in extensive construction during the early 1970's of LNG plants sized for future demands. Cyclic construction patterns are a natural outcome.

Conservation efforts have somewhat reduced demand growth rate, amplifying the cyclic effect.

Uncertainties in supply of either offpeak gas for liquefaction or LNG for satellites coupled with opposition to new facilities have further delayed new starts.

However, baseload LNG terminals have become necessary in order for LNG to help meet national energy requirements. We expect that foreign LNG supply via such terminals will continue to increase. As baseload LNG provides a greater share of gas energy, more peak shaving plants will be needed to meet load swings. On this basis, an average of 8 to 10 large facilities which would be subject to new standards can be expected.

Question 5. Which of your regulations, if not followed, create the greatest safety hazards?

Answer. The regulations regarding design and construction, if not followed, would create the greatest safety hazards because noncompliance with these standards could cause the escape of gas from a pipeline.

Some examples of specific design and construction standards which, if not followed, would create a hazard are: (a) deficient pipeline material, (b) deficient pressure design of the pipeline, (c) deficient design of components, (d) deficient welding or joining of a pipeline, and many others.

Question 5(a). Are they "emphasized" during operator inspections (by OPSO and by the States)?

Answer. Adherence to particular regulations is emphasized according to the type of inspection being conducted. Design and construction standards would be emphasized during the inspection of a pipeline being constructed. It should be noted, however, that there is currently minimal construction of new pipelines. In turn, there are about 1½ million miles of pipeline previously constructed that have a continuing requirement to comply with the operating and maintenance requirements.

Question 5(b). Is enforcement of these regulations given priority?

Answer. A deficiency in the design and construction standards must be corrected immediately since these corrections must be implemented before completing construction of the pipeline.

Question 6. What kind of "public" input into the regulatory process has there been?

Answer. With respect to the gas standards, public input has been limited primarily to that from the six members of the Technical Pipeline Safety Standards Committee who are selected to represent the public. This Committee was established under the Natural Gas Pipeline Safety Act of 1968 to comment on each proposed gas pipeline safety standard. There has been very little direct participation by members of the public in either the gas or liquid standards setting process. For example, of the 133 comments received on our Advance Notice of Proposed Rulemaking regarding the safety of LNG facilities, only 6 are categorized as from the public.

Question 6(a). Please provide a list of "public" petitions received (date received, from whom, subject, disposition).

Answer. None of the petitions for rulemaking which we have received is from the public.

Question 7. Many of the regulations are written in broad performance language.

Question 7(a). Does this fact make it difficult to enforce the regulations inasmuch as there may be a difference of opinion as to the meaning of such terms as "periodic sampling," "as soon as feasible," and "as close as practical?"

Answer. Performance language in the regulations establishes an acceptable level of safety that must be met in design of pipeline system facilities and provides flexibility for industry to develop and use improved technological means of meeting the required level. Where necessary the performance standards may include tests and analytical procedures to check the level of performance. The terms used as examples above are essentially time and distance related performance terms which similarly should provide some flexibility to the operator to comply with the regulation. Performance language does make enforcement more difficult. In particular it makes the determination of noncompliance a much more subjective test and increases the amount of factual evidence that must be gathered to prove that a violation has occurred.

Question 8. Should there be stricter standards for the more volatile liquid commodities, such as liquefied petroleum gas and anhydrous ammonia?

Answer. OPSO has recognized the apparent need for more stringent regulations for pipeline transportation of these highly volatile liquid commodities. In order to develop the data necessary for comprehensive standards, a contract study relative to the problems of "Transportation of Highly Volatile, Toxic, or Corrosive Liquids by Pipeline" was performed (completed February 1976). The data developed by the study, along with the data from other OPSO studies and analysis and NTSB accident reports and recommendations, is presently being used to develop Notices of Proposed Rule Making for Part 195, "Transportation of Liquids by Pipeline." These proposed rules will recognize the different hazards and operating conditions that exist for pipelines transporting highly volatile, toxic, or corrosive liquids. It is expected that these notices will be issued during FY-78.

Question 8(a). How many miles of these pipelines are there?

Question 8(b). Are casualty and damage figures for these commodities inordinately high compared to other liquid, such as crude oil or refined products?

Answer. There are approximately 18,000 miles of pipeline transporting highly volatile liquid commodities in the U.S. This is approximately 8 percent of the mileage of liquid pipelines. OPSO's accident statistics for the past 3 years indicate that these pipelines account for approximately 78 percent of the fatalities and 25 percent of the property damage.

Question 9. What determines whether a gathering line is "rural" or not?

Answer. Under the Natural Gas Pipeline Safety Act of 1968 and the regulations issued thereunder, "rural" gathering lines are those "which lie outside the limits of any incorporated or unincorporated city, town, village, or any other designated residential or commercial area such as a subdivision, a business or shopping center, a community development, or any similar populated area which the Secretary may define as a nonrural area."

Question 10. Are Cost/Benefit analyses performed on proposed regulations?

Answer. In conformance with the Secretary's statement titled, "Policies and Procedures for Simplification Analysis, and Review of Regulations" (copy attached), issued January 31, 1978, an evaluation of the costs and benefits of each proposed regulation will be included in the docket for each proceeding.

U.S. DEPARTMENT OF TRANSPORTATION,
OFFICE OF THE SECRETARY,
Washington, D.C., January 31, 1978.

Subject: Policies and procedures for simplification, analysis, and review of regulations.

From: The Secretary.

To: Secretarial officers; Heads of operating administrations.

Improvement of government regulations has been a prime goal of the Carter Administration. There should be fewer regulations, and those that are issued should be simpler, more comprehensible, and less burdensome. Regulations should not be issued without appropriate involvement of the public; once issued, they should be periodically reviewed and revised as needed, to assure that they continue to meet the needs for which they originally were designed.

To help us achieve these goals I am today issuing the attached statement of Policies and Procedures for Simplification, Analysis, and Review of Regulations, the product of many months of work by all elements of the Department. These policies are being issued initially as an internal memorandum, rather than as a formal Department Order, for two reasons. One, so that we might all gain a working familiarity with them and make any required changes before issuing them as an Order. Two, so that we might more easily make any changes that may be required when the draft Executive Order addressing these concerns is issued in final form.

BROCK ADAMS.

Attachment.

POLICIES AND PROCEDURES FOR SIMPLIFICATION,
ANALYSIS, AND REVIEW OF REGULATIONS

1. *Purpose.*—This memorandum establishes objectives to be pursued in reviewing existing regulations and in issuing new regulations; prescribes procedures and assigns responsibilities to meet those objectives; and establishes a Department Regulations Council to assist and advise the Secretary in achieving those objectives and improving the quality of regulations and the policies and practices which affect the formulation of regulations.

2. *Cancellation.*

(a) The following documents are superseded and cancelled:

1. The Secretary's memorandum of March 23, 1976, on the subject of "Departmental Regulatory Reform".

2. Notice 76-5 entitled "Policies to Improve Analysis and Review of Regulations" issued April 13, 1976, and published in the Federal Register on April 16, 1976 (41 FR 16200-01).

3. The Secretary's memorandum of February 8, 1977, on the subject of "DOT Regulations".

4. The Deputy Secretary's memorandum of March 9, 1977, on the subject of "Review of Regulations—Interim Regulations".

(b) The controls listed in the table of "Controls of Certain Powers and Duties" in the DOT Organization Manual (DOT Order 1100.23A, Figure I-C) requiring the head of an operating administration to coordinate notices of proposed rule-making and regulations with the Office of the Secretary before issuance are superseded and suspended pending their cancellation by amendment to the Organization Manual. The controls requiring the head of an operating administration to coordinate regulatory documents with another operating administration are not affected by this memorandum and continue to be the responsibility of the originating operating administration.

3. *Effective date.*—This memorandum is effective March 1, 1978.

4. *Reference.*

(a) Title 5, United States Code, sections 552(a) (1) and 553 prescribe general procedural requirements of law applicable to all Federal agencies regarding the formulation and issuance of regulations.

(b) Office of Management and Budget (OMB) Circular A-85 regarding consultation with heads of State and local governments in development of Federal programs.

5. *Definitions.*

(a) *Initiating office* means an operating administration or other organizational element within the Department, the head of which is authorized by law or delegation to issue regulations or to formulate regulations for issuance by the Secretary.

(b) *Regulation* means a statement of general or particular applicability and future effect for publication in the Federal Register and designed to implement, interpret, or prescribe law or policy or describing the organization, procedure, or practice requirements of the initiating office or the Department, except that if such statement implements a financial assistance program, it need not be published in the Federal Register to come under this definition.

(c) *Major regulation* means a regulation which is not an emergency regulation and which in the judgment of the head of the initiating office or the Secretary or the Deputy Secretary—

1. Requires a Regulatory Analysis under paragraph 10.a. of this memorandum or is otherwise costly;

2. Concerns a matter on which there is substantial public interest or controversy;

3. Has a significant impact on another operating administration or other parts of the Department or other Federal agency; or

4. Otherwise involves important Department policy.

(d) *Emergency regulation* means a regulation which, in the judgment of the head of the initiating office, circumstances require to be issued without notice and opportunity for public comment or made effective in less than 30 days after publication in the Federal Register.

(e) *Non-major regulation* means a regulation which in the judgment of the head of the initiating office is neither a major nor an emergency regulation.

6. *Objectives.*—To simplify and improve the quality of regulations, it is the policy of the Department that the following objectives be pursued in issuing new regulations and continuing existing regulations:

(a) *Necessity.*—A regulation should not be issued or continue in effect unless it is based on a well-defined need to address a specific problem.

(b) *Clarity.*—A regulation and any supplemental material explaining it should be clear, precise, and understandable to all who may be affected by it.

(c) *Simlicity.*—A regulation should be as short and uncomplicated as possible and before issuance should be coordinated as may be required within the Department and between the Department and other Federal agencies to eliminate or minimize unnecessary duplication, inconsistency, and complexity.

(d) *Timeliness.*—A regulation should be issued in time to respond to the circumstances which require it, and should be modified or cancelled as those circumstances change.

(e) *Reasonableness.*—A regulation should provide a feasible and effective means for producing the desired results and should be developed giving adequate consideration to the alternatives and anticipated safety, environmental, social, economic, and legal consequences.

(f) *Fairness.*—Except in an emergency, a regulation should be issued only after a reasonable and timely opportunity—generally not less than 45 days—has been provided for all interested persons to comment on it.

7. *Department regulations council.*

(a) *Membership; Chairman and Vice Chairman.*—A Department Regulations Council is hereby established comprised as follows:

Regular members:

1. The Deputy Secretary—Chairman.
2. General Counsel—Vice Chairman.
3. Assistant Secretary for Policy and International Affairs.
4. Assistant Secretary for Budget and Programs.
5. Assistant Secretary for Administration.
6. Assistant Secretary for Governmental Affairs.
7. Director, Office of Public and Consumer Affairs.

(8) Director, Departmental Office of Civil Rights.

Ex officio members:

1. Commandant of the Coast Guard.
2. Federal Aviation Administrator.
3. Federal Highway Administrator.
4. Federal Railroad Administrator.
5. National Highway Traffic Safety Administrator.
6. Urban Mass Transportation Administrator.
7. Administrator, Saint Lawrence Seaway Development Corporation.
8. Director, Research and Special Programs Directorate.

(b) *Functions and responsibilities*—The Council shall—

1. Monitor initiating offices' programs for reviewing and revising their existing regulations and make recommendations to the heads of initiating offices and the Secretary when appropriate with regard to the conduct and effectiveness of those programs;

2. Consider each major regulation referred to it and make such recommendations as the members consider appropriate regarding the advisability of the Secretary's concurring in its issuance;

3. On its own initiative or upon request, review, discuss, and make such recommendations to the Secretary as the members consider appropriate regarding Department regulatory policies and procedures; and

4. In coordination with the initiating office(s) concerned, designate such task forces or require the preparation of such reports, analyses, or options papers as it may consider necessary for proper Council consideration of any regulatory matter or inquiry referred to or initiated by the Council.

(c) *Staff support.*—The General Counsel shall provide regular staff support to the Council and designate an Assistant General Counsel to be responsible for performing the functions assigned to the General Counsel's office. These shall include the coordination of the staffing, analysis, and review of items coming before the Council or on which the Council requires additional information; the convening and management of task forces designed to review and improve significant categories of existing regulations; and such additional duties as the Council may specify.

(d) *Meetings; Attendance of members.*—The Council will meet on a regular bi-monthly basis and on special occasions, at the call of the Chairman, either on his or her own initiative or at the request of the head of an initiating office. Attendance by ex officio members is optional. Any member who is unable to attend a meeting may be represented at the meeting but only by the member's principal deputy or Chief Counsel. A member may be accompanied by supporting staff for purposes of briefing the Council or assisting the member with respect to an agenda item or major regulation scheduled for discussion.

(e) *Agenda.*—The General Counsel's office shall prepare an agenda for each meeting and distribute it to the members in advance of the meeting, together with any documents to be discussed at the meeting. When the agenda includes consideration of a major regulation, the General Counsel's office shall make such arrangements with the initiating office as may be appropriate for briefing the Council and responding to questions concerning the regulation.

(f) *Minutes.*—The General Counsel's office shall prepare summary minutes following each meeting and distribute them to the members.

8. *Responsibilities of initiating offices*

(a) The head of each initiating office has primary responsibility for—

1. Reviewing proposed regulations to ensure that they meet the objectives set forth in paragraph 6. of this memorandum;

2. Issuing regulations within the scope of his or her statutory or delegated authority;

3. Coordinating its proposed regulations with other Federal agencies and other operating administrations and organizational elements within the Department; and

4. In conjunction with the Assistant Secretary for Governmental Affairs, consulting with State and local governments as required under OMB Circular A-85 in the development of regulations to be issued by that office.

(b) To improve the quality of existing and future regulations in accordance with the purposes and policies set forth in this memorandum, the head of each initiating office shall—

1. Establish and carry out a program for reviewing and revoking or revising existing regulations in accordance with paragraph 11. of this memorandum;

2. Include in the public docket for each proposed regulation a draft Regulatory Analysis if required under paragraph 10.a. of this memorandum, otherwise a draft evaluation quantifying, to the extent practicable, its estimated cost to the private sector, consumers, Federal, State and local governments, as well as its anticipated benefits and impacts;

3. Include in the public docket for each final regulation a final Regulatory Analysis or evaluation;

4. Submit Regulations Reports to the Department Regulations Council in accordance with paragraph 13.a. of this memorandum;

5. Submit for the Secretary's concurrence before issuance regulatory documents pertaining to major regulations, together with such supporting documentation as may be required by paragraph 9. of this memorandum;

6. Advise the Secretary by memorandum, before issuance if possible, of the circumstances requiring emergency issuance of an otherwise major regulation;

7. Name a Regulations Officer to coordinate the review of regulations and act as principal staff liaison with the Council; and

8. Inform the Deputy Secretary or the General Counsel of any regulatory matter which should be reviewed by or coordinated with the Council.

9. *Review of major regulations.*

(a) Before committing substantial resources to the development of a major regulation, the head of the initiating office shall have prepared and approved a Work Plan which states or describes—

1. The need for the regulation;

2. The objective(s) of the regulation;

3. The legal authority for the regulation;

4. The major issues to be considered and the alternative approaches to be explored for solving the problem;

5. The name of the individual or organizational unit primarily responsible for developing the regulation and of the accountable policy official;

6. Whether or not a Regulatory Analysis is likely to be required and how and where it will be produced;

7. The probable reporting requirements that may be involved;

8. How and when the Congress, interest groups, other agencies, and the public will have opportunities to participate in the regulatory process; and

9. The tentative target dates for completing each step in the development of the regulation.

(b) Before issuing for publication in the Federal Register any regulatory document of substantive significance (e.g. advance notice of proposed rulemaking, notice of proposed rulemaking, notice of withdrawal or amendment of a proposed final rule) pertaining to a major regulation, the initiating office shall submit it to the Secretary for concurrence.

(c) To receive Secretarial concurrence for issuance of an advance notice of proposed rulemaking, a notice of proposed rulemaking, a substantive amendment to an outstanding proposal, or a final rule pertaining to a major regulation, the initiating office shall submit it together with its approved Work Plan, a draft Regulatory Analysis or the evaluation required by paragraph 8.b. (2) and (3) of this memorandum and a summary of the results of any coordination outside the initiating office to the General Counsel's office at least 30 days before the proposed date of issuance. Once a Work Plan and Regulatory Analysis or evaluation is developed for a particular major regulation, it need only be updated and supplemented for successive regulatory documents pertaining to that major regulation. In the case of a final rule being submitted for Secretarial concurrence, there should be an accompanying summary of significant public comments received.

(d) Before submitting a final rule for Secretarial concurrence, the head of the initiating office shall, at a minimum:

1. review the Work Plan and determine that the direct and indirect effects of the regulation have been adequately considered and that the least burdensome of the acceptable alternatives has been chosen;
2. determine that the regulation is written clearly and is understandable to those subject to or affected by its provisions;
3. assure an estimate has been made of the number of individuals and/or organizations that will be subject to new reporting burdens or recordkeeping requirements; and
4. determine that a plan for evaluating the regulation after its issuance has been developed.

(e) The General Counsel's office shall distribute each regulatory document and accompanying supporting documents received from an initiating office under paragraph 9.c. of this memorandum to all appropriate Secretarial Officers for review and shall coordinate their comments and recommendations for transmittal, together with a staff analysis, to the Secretary through the Deputy Secretary.

(f) If, in the judgment of the Deputy Secretary or the General Counsel, the views of the Department Regulations Council on a major regulation are desirable or likely to assist the Secretary in determining whether to concur in issuance of that regulation, it shall be referred to the Council for consideration at its next regular or special meeting. Council consideration of a major regulation is in addition to and not in lieu of Secretarial staff review, both of which shall be scheduled and coordinated so as to minimize delay in transmitting the resulting recommendations to the Secretary.

(g) In the case of a notice of an exclusively procedural nature (e.g. extension of time for comments, scheduling or rescheduling of a public hearing) pertaining to a major regulation, the initiating office shall submit a copy of the notice, together with a covering memorandum, to the General Counsel's office at least 10 days before the intended date of issuance. The memorandum shall specify the intended date of issuance and include a statement as to why the notice is required and any changes that it will cause in the previously anticipated schedule of action dates on the major regulation concerned.

(h) The General Counsel's office shall advise the Secretary through the Deputy Secretary of each procedural regulatory document received from an initiating office under paragraph 9.g. of this memorandum. Unless otherwise notified before the intended date of issuance, Secretarial concurrence may be presumed.

10. *Regulatory analyses.*

(a) An initiating office shall prepare and place in the public docket a draft Regulatory Analysis for each of its proposed regulations which—

1. Could produce a major effect on the general economy in terms of costs, consumer prices, or production;
2. Could produce a major increase in costs or prices for individual industries, levels of government, geographic regions, or specific elements of the population; or
3. The Secretary or head of the initiating office determines deserves such analysis.

(b) Each draft Regulatory Analysis shall contain—

1. A succinct statement of the problem necessitating Federal action;
2. The major alternative ways of dealing with the problem that will be considered by the initiating office;
3. An analysis of the economic consequences of the proposed regulation and major alternative approaches considered; and
4. An assessment of the approach selected in relation to other alternatives.

(c) A draft Regulatory Analysis should address all salient points to the maximum extent possible. If data are lacking or there are questions about how to determine or analyze points of interest, the problem should be noted in the draft Regulatory Analysis so as to help elicit the necessary information during the public comment period on the advance notice or notice of proposed rulemaking.

(d) The initiating office shall include in each advance notice or notice of proposed rulemaking on a proposal requiring a Regulatory Analysis, an explanation of the regulatory approach being considered or proposed, a short description of the alternative approaches, and a statement announcing the availability of a draft Regulatory Analysis for public review and comment.

(e) When a regulation for which a draft Regulatory Analysis is required is finalized, the initiating office shall prepare a final Regulatory Analysis and place it in the public docket at the time of or before issuing the final regulation.

11. *Review and revision of existing regulations.*

(a) Each initiating office shall establish a program for reviewing its existing regulations and revoking or revising those regulations which it determines are not achieving their intended purpose.

(b) In identifying existing regulations for review and possible revocation or revision and in determining the order in which they are to be reviewed, an initiating office shall consider—

1. the nature and extent of complaints received from other agencies, State and local governments, and the public;
2. the need for simplification and clarification;
3. the potential for consolidating overlapping or repetitive regulations in the same general subject area;
4. the need for eliminating conflicts and inconsistencies in its own regulations or those of other initiating offices or other agencies;
5. the length of time since the regulations were last reviewed or evaluated;
- and
6. the significance and continued relevance of the problem the regulations were originally intended to solve.

(c) Each initiating office shall submit to the Department Regulations Council, through the General Counsel, a list of the existing regulations it has selected for review and possible revocation or revision together with a brief description of the reasons for each selection and a target date for completing the review and determining the course of corrective action to be taken. The list of existing regulations initially selected shall be submitted to the General Counsel not later than May 15, 1978, and updated as part of the initiating office's semi-annual Regulations Report and the bi-monthly supplements required under paragraph 13 of this memorandum.

12. *Opportunity for public participation.*—In addition to publishing proposals and notices of regulatory actions in the Federal Register, initiating offices should, in appropriate circumstances, provide a clear, concise notice to publications likely to be read by those affected, and to the extent practical, notify interested parties directly. If the subject is unusually complex, or if there is a significant potential for adverse effects from a failure to provide an opportunity for early public participation, initiating offices should consider supplementing the minimum rule-making steps required by section 553 of title 5, United States Code. For example, an advance notice of proposed rulemaking may be employed to solicit comments and suggestions on an upcoming notice of proposed rulemaking or an open conference may be held at which a discussion between all interested parties would help narrow or clarify issues. However, such supplementary procedures should be used only when they will serve to clarify the issues and enhance effective public participation. They should not be used if they would delay the process of developing the regulation unless significant additional information is to be gained by the agency or the public.

13. *Reporting requirements.*

(a) Each initiating office shall submit a semi-annual Regulations Report to the Department Regulations Council summarizing each proposed and each final regulation that office expects to publish in the Federal Register during the succeeding 12 months or such longer projected period as may be anticipated. This report shall be delivered to the General Counsel not later than March 31, 1978, and the last working day of June and December each year thereafter and supplemented with a bi-monthly updating report not later than the last working day of February, April, August, and October each year. The report shall specify, for each proposed and final regulation expected to be published, a short descriptive title; the earliest expected publication date; a contact office or official who can provide additional information; and whether it is a major or a non-major regulation.

(b) In the case of a major regulation, the report shall include a brief statement as to why it is considered major and the past and anticipated chronology of the development of the regulation. In the case of non-major regulations issued routinely and frequently as part of an established body of technical requirements (such as the Federal Aviation Administration's Airspace Rules) to keep those requirements operationally current, only the general category of the regulations, the identity of a contact office or official and an indication of the expected volume of issuance need be included; individual regulations need not be listed.

(c) The General Counsel's office shall consolidate the initiating offices' Regulations Reports for the Council and from that consolidation prepare a semi-annual Department Regulations Agenda for publication in the Federal Register. Federal

Register publication will be for the stated purpose of sharing with interested members of the public the Department's preliminary expectations regarding its future regulatory actions and will not impose any binding obligation on the Department or initiating offices with regard to any specific item in the report or preclude regulatory action on any unspecified item.

14. Applicability.—This memorandum does not apply to any rulemaking in which a notice of proposed rulemaking was issued before the effective date of this memorandum and which was still in progress on that date.

Question 11. Leak surveys on gas distribution systems are now required annually in "business districts" but only every 5 years outside such areas.

Question 11(a). Are areas including apartment complexes, churches, schools, hospitals, recreation complexes, or similar places where large numbers of people may be present considered "business districts" for purposes of annual leak surveys?

Answer. For purposes of this requirement, we have interpreted the term "business districts" to mean an area containing shops and offices where persons engage in the purchase and sale of commodities or in related financial transactions. Thus, areas such as apartment complexes would not be considered "business districts" solely on the basis that a large number of people may be present.

Question 11(b). Should there be more frequent leak surveys (1) in densely populated areas (for example, based upon "class locations"—see 49 CFR 192.5—which recognize population densities), or (2) on older pipelines?

Answer. Under the present rule governing leakage surveys in distribution systems, the frequency of surveys must be determined on a case-by-case basis by considering the nature of the operations and the local conditions. Since the purpose of the survey is to insure that hazardous leaks are found and repaired, they must be conducted as frequently as circumstances warrant, but in no event less frequently than once a year in business districts and every 5 years elsewhere.

At present OPSO does not have a statistical or other basis for concluding that a more specific and less flexible leakage survey requirement would be cost effective in either densely populated areas or on older pipelines. Since leakage surveys are beneficial only after some damage has occurred to a pipeline, OPSO believes that preventive measures such as proper corrosion control and installation techniques provide a better regulatory solution to the problem of leaks. Also, other existing requirements governing odorization and public education have a positive effect in enabling early detection of leaks.

In the case of older pipeline systems, OPSO is currently conducting a study to evaluate the condition of these older lines to determine what regulatory action, if any, should be taken to reduce hazards due to leaks and breakage. We expect that this study will be completed later this year.

Question 12. Are you keeping current on petitions for regulatory changes or waivers?

Answer. OPSO has not been able to keep current on petitions for regulatory changes or waivers. However, petitions with high priority, such as those involving the trans-Alaska crude oil pipeline, have been answered without undue delay.

Question 12(a). Please provide a listing of outstanding petitions, subject matter, date received, and petitioner.

Answer. Attached are the requested listings of outstanding petitions for regulatory changes and waivers.

Question 12(b). What percent of OPSO manpower is devoted to regulatory projects?

Answer. About 20 percent.

Petition No.	From	Subject
77-5.....	ASME (Apr. 14, 1977).....	Petition to amend sec. 192.611 to permit a revised MAOP based on previous minimum test pressure.
77-9.....	ASME (Feb. 24 and Aug. 31, 1977).....	Petition for rulemaking to update references in appendices A and B.
77-10.....	ASME (Aug. 29, 1977).....	Petition for rule change to amend part 192 concerning X-70 pipe.
77-11.....	Consolidated X-ray (Sept. 21, 1977).....	Petition for rule change to amend sec. 195.234(g) to read the same as sec. 192.243(f) concerning nondestructive testing and retention of testing records of welds.
77-12.....	Colonial P/L Co. (Nov. 7, 1977).....	Petition for rule change to amend sec. 195.410 to provide an exception to line marking requirements where the navigable crossing is within 100 ft of an existing market.

Petition No.	From	Subject
76-1	Wyoming PSC (Jan. 21, 1976)	Petition to amend sec. 191.5 so that an operator does not have to admit that a leak on his system caused an accident; telephonic notice.
76-7	National LP-Gas Assoc	Petition to amend sec. 192.11(a), petroleum gas systems to exempt "installation" serving 9 or less customers.
76-18	Virginia SCC (Aug. 9, 1976)	Petition for rulemaking to amend sec. 192.465(a) to exempt pipelines cathodically protected under sec. 192.483(c)
76-26	ASME (July 23, 1971 and Nov. 3, 1976)	Petition for rulemaking to amend sec. 192.105(b) to allow limited heat treatment of localized hard spots.
76-29	Arkansas PUP (Nov. 8, 1976 and Oct. 18, 1976)	Petition for rulemaking to amend sec. 192.465 to allow monitoring of "hot spot" protection on a 3-yr basis.
76-30	Catholic Protection Service (Nov. 18, 1976)	Petition for rulemaking to amend sec. 192.465 to allow for monitoring of transmission lines on a "sampling" or more practical basis.
75-1	Florida State Fire Marshal (Jan. 20, 1975)	Petition to amend part 192 to allow use of LPG as a test medium.
75-3	ASME (Oct. 23, 1972)	Petition for rulemaking to establish temperature bases and design factor for plastic pipe, secs. 192.121 and 192.123.
75-7	Florida PSC (Feb. 21 and May 12, 1975)	Petition for rulemaking to require transmission systems to protect against overpressuring on customer's line.
75-10	Rhode Island PUC (June 12, 1975)	Petition for rule change to sec. 192.197, control of the pressure of gas delivered from high pressure distribution systems.
75-12	ASME (Dec. 29, 1975)	Petition for rule change in wording of secs. 192.705, 706, 723, 731, 739, 743, 745, 747, and 749 to read "at least once each calendar year, but with intervals not exceeding 15 months."
74-1	ASME (Jan. 15, 1974)	Proposed change to language in form F 7100.1-1 involving number of service lines, location categories, and leaks scheduled for repairs, parts L, M, and P.
74-2	do	Proposed change to language in sec. 192.167, compressor stations: Emergency shutdown, to clarify " * * * system must be designed so that it will not function at the 'wrong time' * * * "
74-6	Arkansas Louisiana Gas Co. (May 10, 1974)	Petition for rulemaking, suggesting changes to part 192 to add specifications for steel butt weldings, steel screw fittings and pipe nipples.
74-13	Reynolds Aluminum (Sept. 11, 1974)	Petition for rule change under part 192 concerning definitions, design criteria, welding methods, repair procedures and installation techniques relating to the use of aluminum pipe for gas pipelines.
74-16	API (Nov. 27, 1974)	Petition for rule change under sec. 195.302 to reduce the required hydrostatic test hold period from 24 to 8 and 4 where visual inspection is practicable.
77-2W	Texas Gas Transmission Corp. (Jan. 17, 1977)	Request for waiver from compliance with MAOP in class location under sec. 192.619(c).
77-3W	Algonquin Gas Transmission Co. (Dec. 27, 1976)	Request for waiver from compliance with MAOP under sec. 192.619.
77-9W	Alyeska (Oct. 17, 1977)	Request for waiver from compliance with welding requirements of secs. 195.226, 228, 230, 232, and 234 for 213 welds at the Valdez terminal.
77-10W	Lexington Properties	Request for waiver from compliance with master meter requirements under sec. 192.457 for apartment unit under government subsidy.
77-13W	Tennessee Gas (Nov. 18, 1977)	Request for waiver from line marking requirements of sec. 192.707 to allow a system of line markers on navigable streams for multiple line crossings.
76-2W	Williams P/L Co.	Request for waiver from valve location requirements of sec. 195.260 (a).
76-3	Nordlander (Western Mobile Home Association) (Jan. 29, 1976)	Request for waiver from master meter requirements of sec. 192.457 for mobile home operators.
76-3W	City of Baker, La. (Mar. 19, 1976)	Request for waiver from cathodic protection requirements of secs. 192.455 and 192.457 for 3 sections of piping.
76-14W	City of Iuka, Miss. (July 21, 1976)	Request for "additional time" to meet corrosion control requirements of sec. 192.457(b).
76-15W	City of Morgan City, La. (July 23, 1976)	Request to extension of Aug. 14, 1976 deadline for corrosion control requirements of sec. 192.457(b).
76-16	Sun P/L Co.	Request for waiver from sec. 195.260(e) valve location at water crossing.
76-23	National Center for Housing Management	Request for extension of Aug. 1, 1976 deadline for cathodic protection requirements under sec. 192.457(b).
75-8W	Texaco, N. C. (June 2, 1975)	Request for waiver from line marking requirements of sec. 192.707.
75-9W	Panhandle Eastern (June 12, 1975)	Request for waiver from compliance from sec. 192.611, change in class location for 390 mi of 30 in transmission line.
75-11W	Exxon (Aug. 15, 1975)	Request for waiver from compliance with line marking requirements of sec. 192.707, present signs should last past the 1980 changeover date.

Question 13. How are the amendments to the Federal pipeline safety regulations generally originated and how long does it generally take to move them through the rulemaking process?

Answer. Amendments are generally originated by petitions for rulemaking or waiver, OPSO investigations, or both. Amendments of high priority, which do not involve complex technical issues or serious cost/benefit questions, can be processed in about one year. Others are processed in varying lengths of time depending on other demands placed on the regulatory staff.

Question 13(a). Please provide a list of the current amendments to the gas and liquid regulations and, for each, include the following information:

Question 13(b). What/who inspired the amendment (including appropriate dates of petitions, studies, or recommendations which inspired the amendment)?

Answer. The information requested is set forth below for the years 1977 and 1978:

Amendment	Title	Basis for the amendment
192-28 issued July 1, 1977.....	Corrosion control for metal alloy fittings in plastic pipelines.	Petition by AMP Inc., dated Aug. 14, 1973, and waivers by State agencies granted in 1975 and 1976.
192-29 and 195-12 issued Aug. 22, 1977	Longitudinal seams in pipe bends.....	Petition by Alyeska Pipeline Service Co., dated Oct. 18, 1975, and public notice requesting information published Dec. 31, 1975.
192-30 issued Nov. 18, 1977.....	Conversion of existing pipelines to gas service.	Petition by the Interstate Natural Gas Assoc. of America, dated Feb. 14, 1977.
195-13 issued Feb. 10, 1978.....	Conversion of existing pipelines to liquid service.	Petition by the American Petroleum Institute, dated Feb. 18, 1977.

Question 14. What action has OPSO taken on each National Transportation Safety Board recommendation? What is the current status of OPSO's efforts in this area?

Answer. All NTSB recommendations directed to OPSO receive prompt attention. Within 10 working days, acknowledgement of the receipt of a recommendation is directed to NTSB. When it is not practical to answer fully, this first response will serve primarily as a formal acknowledgement that the recommendation was received. No later than 90 days after receipt of the NTSB recommendation OPSO transmits a substantive reply to NTSB covering the merits of the recommendation. If the action has already been completed, a full description of that action is provided and the recommendation is closed. In all other cases, OPSO's reply to NTSB will indicate intention to: (1) initiate and conduct procedures for determining the practicability of the recommendation; (2) initiate and conduct procedures for adopting all or part of such recommendation setting forth in detail the reasons for any part of the recommendation not adopted; or (3) refuse to initiate or conduct procedures for adopting such recommendations setting forth in detail the reasons for such refusal.

Since 1968, DOT-OPSO has received from NTSB 81 natural gas Safety Recommendations and 33 liquid Safety Recommendations. The current status of the 114 NTSB Safety Recommendations is as follows:

Action	Gas	Liquid	Total
Completed essentially as recommended.....	41	9	50
Contingent upon contract study underway.....	1	0	1
Contingent upon OPSO study underway.....	8	10	18
Deferred pending availability of OPSO resources.....	7	9	16
Disagree—because already included in regulations or other alternative.....	16	5	21
Recommendation under review.....	8	0	8
Total.....	81	33	114

Question 15. Has OPSO established procedures to allow for the safe conversion of pipeline from one service to another (gas to liquid, liquid to gas)?

Answer. Procedures for the Safe conversion of liquid pipelines to gas service and vice versa were published recently. Attached are copies of Amendment 192-30 and Amendment 195-13 which established the procedures.

[From the Federal Register, November 25, 1977]

DEPARTMENT OF TRANSPORTATION,
MATERIALS TRANSPORTATION BUREAU,
Washington, D.C.

TITLE 49—TRANSPORTATION

CHAPTER I—MATERIALS TRANSPORTATION BUREAU, DEPARTMENT OF TRANSPORTATION

Subchapter D—Pipeline Safety

[Amdt. 192-30; Docket No. OPSO 77-3]

PART 192—TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE

Conversion of Existing Pipelines to Gas Service

Agency: Materials Transportation Bureau, Department of Transportation.
Action: Final rule.

Summary: This amendment permits previously used steel pipelines to qualify for use in gas service under Part 192 without meeting the design and construction requirements applicable to new pipelines. The need for the amendment arises from the changing transportation patterns for oil and gas in pipelines in the United States. For example, as new sources of gas become available and past oil sources decline, significant cost savings and environmental benefits are projected from the use of existing oil lines to carry gas. At the present time, however, the Federal gas pipeline safety standards require that any pipeline readied for gas service after March 12, 1971 (July 31, 1977, in the case of offshore gathering lines), must be designed and constructed in accordance with the applicable Federal safety standards. Although appropriate for newly installed gas lines, this requirement is more stringent than necessary to provide for public or employee safety when applied to previously operated steel lines being converted to service subject to Part 192. Most lines being proposed for conversion have been operated safely, and it would impose an unnecessary burden on the future use of the nation's pipeline transportation systems if the proposed use of such lines were denied for failure to meet requirements applicable to new lines.

Effective date: This amendment becomes effective on December 30, 1977.

For further information contact: Frank E. Fulton, 202-426-2082.

Supplementary information: To alleviate this regulatory burden and the similarly undesirable effect of requiring operators of converted pipelines to obtain waivers from design and construction requirements, the Materials Transportation Bureau (MTB) has adopted alternative safety requirements governing the qualification of existing steel pipelines for service under Part 192. Under the new requirements, an operator prepares and follows a written conversion for procedure. The procedure must provide for visual inspection and historical review of the pipeline to identify actual or potential sources of failure. The review must be supplemented with appropriate tests, such as physical or chemical testing, where historical records are insufficient to judge the line's condition. Problem areas must be corrected, normally by repair, replacement, or other alteration. A pressure test must be performed to demonstrate that the structural integrity of the pipeline is sufficient for safe operation. Finally, the operator must keep a record of the investigations, tests, and remedial measures conducted on the pipeline.

This amendment results from a Notice of Proposed Rulemaking (Notice 77-2) issued by the Office of Pipeline Safety Operations on March 18, 1977, (42 FR 15932, March 24, 1977). The Notice was based, in part, on a petition by the Interstate Natural Gas Association of America to establish alternative requirements governing the safety of existing pipelines being converted to service under Part 192. Interested persons were invited to participate in the rulemaking proceeding by submitting written data, views, or arguments by May 5, 1977. In addition, in accordance with Sec. 4(b) of the Natural Gas Pipeline Safety Act of 1968 (49 USC 1673(b)), the Technical Pipeline Safety Standards Committee (TPSSC) met in Washington, D.C., on June 7 and 8, 1977, to consider the proposal. The TPSSC's report is set forth below.

Notice 77-2 proposed that a new Subpart N be established to prescribe safety standards for the conversion of existing steel pipelines to service subject to Part 192. In conjunction with this proposal, the Notice proposed that § 192.13 be amended to exempt pipelines converted in accordance with Subpart N from the design and construction requirements of Part 192. In the final rules, however, for organizational simplicity, the substance of the proposed Subpart N, relating to written procedures (§ 192.803(c)), recordkeeping (§ 192.803(d)), and structural integrity (§ 192.805(b)(2)-(4)), is transferred to a new § 192.14. Except for an amendment to § 192.619(a)(2)(ii), the substantive proposals relating to operation and maintenance (§ 192.807(a)) and maximum allowable operating pressure (§ 192.809) are deleted as duplicative of current requirements in Part 192 governing those subjects. The current requirements would apply to any existing steel pipeline which qualifies for use under Part 192 in accordance with the new § 192.14. The substance of proposed § 192.807(b), which would provide a 12-month leadtime for a converted pipeline to meet the corrosion control requirements of Subpart I, is transferred to § 192.452 with additional changes as discussed below. The remaining provisions in the Notice are deleted as unnecessary as a result of the organizational change.

In adopting the final rules, MTB considered all the written comments received as a result of Notice 77-2 and the recommendations of the TPSSC. A discussion of the significant comments and recommendations and their relation to changes in the final rules follows. Changes intended for clarification of the substance of the proposal and editorial modifications which do not alter the proposal are not discussed.

All the public commenters and the TPSSC agreed with the need for the amendment, although many individual changes were suggested. One commenter thought the new conversion rules should be broadened in scope to apply to "pipeline facilities" and not just "pipelines" as proposed in the Notice. This comment was not adopted because the proposed conversion rules were not intended to qualify for use under Part 192 any facility other than a pipeline. Any existing facility other than a pipeline that an operator wants to use in service under Part 192 would have to qualify for use either by meeting applicable requirements or by appropriate waiver.

One commenter and the TPSSC requested that the final rules be changed to exclude from coverage those pipelines which are designed and built to alternately carry gas and oil in dual service. This request was made because it could be inferred from the Notice that an operator would have to carry out conversion procedures each time such a pipeline is changed from oil to gas service. Notwithstanding this inference, MTB did not intend that the procedures be mandatory in these situations. A dual service pipeline, having been designed and built for gas service subject to Part 192, does not undergo "conversion" within the meaning of Notice 77-2. MTB believes this problem of interpretation is corrected in the final rules where under §§ 192.13(a)(2) and 192.14, it is clear that the conversion procedures only apply at the time an existing steel pipeline is readied for gas service subject to Part 192. The procedures do not affect existing dual service lines which either were built in accordance with the design and construction requirements of Part 192 or are not subject to those requirements because they were readied for service subject to Part 192 before the effective dates set forth in § 192.13(a). Also, under the final rules, an operator who wishes to convert an existing oil line to dual service may do so under § 192.14.

Commenting on a provision in § 192.801 in the Notice, which provided that the Secretary must grant an approval for conversion of any pipeline not made of steel, one person suggested that State agencies be authorized to approve the conversion of intrastate pipelines. Despite the term "approval," this provision was not intended to establish an independent case-by-case process for qualifying the conversion of nonsteel pipelines to service subject to Part 192. It merely was intended to emphasize that the proposed conversion procedures were not applicable to the conversion of nonsteel pipelines, and that if such a pipeline could not meet the design and construction requirements of Part 192, the operator would have to obtain a waiver from the Secretary for any requirements which could not be met. Since Part 192 does not contain any general provision governing waivers, it does not appear necessary to include such a provision specifically for the conversion of nonsteel pipelines. It is therefore deleted from the final rules. Interested persons should recognize, however, that for intrastate pipelines subject to the Natural Gas Pipeline Safety Act of 1968 (49 USC 1671 et seq.), State agencies participating under Sec. 5 of the Act are authorized to grant waivers

from compliance with any design or construction requirement which a nonsteel pipeline that is proposed for conversion cannot meet. MTB will review each waiver of this type before it becomes effective.

It was suggested by one commenter that the government assume greater control over conversion projects by requiring that an operator's procedures be submitted for government review before a project begins. MTB does not favor this regulatory approach which, in effect, would require operators to obtain a government permit for each conversion project. The approach would create an additional burden on both government and industry that does not appear warranted by the safety problems involved in a steel pipeline conversion project. The safety of a converted pipeline can be provided through the establishment and enforcement of adequate general safety standards covering the full range of identifiable safety problems. The purpose of this rulemaking proceeding is to meet this objective.

A number of commenters and the TPSSC were concerned about the proposal under § 192.805(b) (2) in the Notice that a conversion be "consistent" with Part 192. They interpreted this provision as requiring application of the design and construction requirements, although the purpose of Notice 77-2 was to avoid this result. To eliminate any possible confusion on the point, the provision is not included in the standards for conversion in § 192.14.

Notice 77-2 proposed that pipelines being converted must be pressure tested in accordance with Subpart J of Part 192 except for pipelines tested similarly within the preceding 5 years. Several commenters asked that this exception be broadened to cover additional circumstances. Two persons interested in offshore pipelines requested that the exception include pipelines satisfactorily tested in accordance with the U.S. Geological Survey's Order No. 9. Others argued that a pipeline's operating history since it was last tested, rather than an arbitrary 5-year time period, should be adopted as a determinant of whether a new test is necessary.

Notwithstanding these comments to enlarge the proposed exception from pressure testing, in the final rules MTB has adopted the TPSSC's recommendation that a new pressure test be mandatory for all converted pipelines. Upon further consideration, MTB agrees with the TPSSC's view that a pressure test is the best indicator of defects which may still exist in the pipeline even though it otherwise appears in satisfactory condition. In other words, harmful damage to a pipeline occurring since it was last tested which might not be discovered by investigations alone probably would be detected by a new pressure test.

Several commenters and the TPSSC pointed out that the proposed requirements under § 192.809 in the Notice for determining the maximum allowable operating pressure (MAOP) of a converted pipeline would allow the MAOP to exceed the design pressure of the pipeline. This result was not intended in drafting Notice 77-2, and it would be contrary to the current requirements under § 192.619(a) for determining the MAOP of any pipeline subject to Part 192. These comments were taken into account by developing a final rule which deletes the proposed § 192.809 as duplicative of the current requirements in Part 192 governing MAOP.

Notice 77-2 provided in § 192.809 that the factors prescribed in § 192.619(a) (2) (ii) were to be used in determining the MAOP of a converted pipeline, except that for a pipeline in a Class 1 location, the minimum factor was to be 1.25. This factor was consistent with the proposal under § 192.805(b) (4) in the Notice, providing that converted pipelines must be tested to at least 1.25 times the proposed MAOP. In the final rules, this proposed minimum test pressure requirement is prescribed by § 192.14(a) (4) and an amendment to § 192.619(a) (2) (ii) which sets forth the applicable factors for converted pipelines. Other than the minimum factor of 1.25, the factors adopted for a converted pipeline, located either offshore or onshore, are the same as the ones applicable to newly installed pipelines. The smaller factors in § 192.619(a) (ii), applicable to gas pipelines installed before certain dates, were not adopted for converted pipelines. The smaller factors were established to permit then existing gas lines to continue in use without having to be retested to the higher test pressures required for new pipelines. There is no need for a similar "grandfather" provision for converted lines.

One further change in the final rules involves the applicability of the corrosion control requirements of Subpart I of Part 192 to converted pipelines. Under § 192.807(b) in the Notice, it was proposed that converted pipelines be allowed 12 months leadtime to meet these requirements without regard to how the requirements should apply. If the current requirements were applied, a converted pipeline which was installed after July 31, 1971, would have to meet those corro-

sion control requirements specifically applicable to newly installed pipelines (e.g., § 192.455) as well as any generally applicable requirements. Because of the problems of coating and cathodically protecting an existing pipeline, MTB believes that it would be unreasonable in most cases to require that a converted pipeline meet corrosion control requirements specifically applicable to newly installed pipelines. Thus, for purposes of corrosion control, converted lines should for the most part be treated similarly to gas pipelines existing when Subpart I was adopted. They should be required to meet the requirements applicable to gas pipelines installed before August 1, 1971 (e.g., § 192.457). However, a few exceptions should apply to this rule. Pipeline segments which are replaced, relocated, or substantially altered during the conversion of an existing line can readily comply with requirements applicable to new pipelines. Also, segments which already meet these requirements before being converted to gas service, such as a steel pipeline constructed in compliance with 49 CFR Part 195, should be required to maintain that level of safety. Of course, any segment installed in conjunction with a converted pipeline must meet the corrosion control requirements governing a new line even though it may appear to be part of an overall conversion project. Accordingly, a new § 192.452 is established governing the applicability of Subpart I to converted pipelines.

REPORT OF THE TECHNICAL PIPELINE SAFETY STANDARDS COMMITTEE

Section 4(b) of the Natural Gas Pipeline Safety Act of 1968 requires that all proposed standards and amendments to such standards pertaining to gas pipelines be submitted to the Committee and that the Committee be afforded a reasonable opportunity to prepare a report on the technical feasibility, reasonableness, and practicability of each proposal. This amendment to Part 192 was submitted as Item 2 in a list of two proposed amendments at a meeting in Washington, D.C., on June 7 and 8, 1977. On July 11, 1977, the Committee filed the following favorable report. A minority report was not filed.

This communication is the official report of the Technical Pipeline Safety Standards Committee concerning the Committee's action on two amendments to 49 CFR Part 192 proposed by the Office of Pipeline Safety Operations and other matters which the Committee decided should be brought to the attention of the Department of Transportation.

The following described actions were taken by the Committee at a meeting held in Washington, D.C., on June 7 and 8, 1977.

* * * * *

Item 2 of the agenda was a proposal by OPSO to establish a new Subpart N—Conversion of Existing Pipeline to Gas Service within Part 192 of Title 49, Code of Federal Regulations, as published in Notice 77-2; Docket No. OPSO-77-3. By an affirmative vote of 10-1, the Committee found the following language for revision of § 192.13 (a) and (b), addition to Table of Contents and for Subpart N, is technically feasible, reasonable, and practicable.

* * * * *

[The substance of the language suggested is adopted in the final rules as discussed above.]

The Committee was apprised of the problem created by Subpart N in respect to pipelines which, from an operating sense, regularly switch from gas to liquid and back again. From the language of Subpart N the mandated requirements for conversion would have to be met at each change.

By a unanimous affirmative vote, it was agreed that the Committee's intent in adopting Subpart N was to not make it applicable to the operating conversion of liquid lines to gas and vice versa from an operations standpoint, and that OPSO staff be requested to draft appropriate changes to clarify the intent of Subpart N.

PRINCIPAL AUTHORS

F. E. Fulton, L. M. Furrow and R. L. Beauregard.

In consideration of the foregoing, Part 192 of Title 49 of the Code of Federal Regulations is amended as follows, effective December 30, 1977.

1. Section 192.13(a) is revised to read as follows:

§ 192.13 General.

(a) No person may operate a segment of pipeline that is readed for service after March 12, 1971, or in the case of an offshore gathering line, after July 31, 1977, unless—

(1) The pipeline has been designed, installed, constructed, initially inspected, and initially tested in accordance with this part; or

(2) The pipeline qualifies for use under this part in accordance with § 192.14.

* * * * *

2. Section 192.14 is added to read as follows:

§ 192.14 Conversion to service subject to this part.

(a) A steel pipeline previously used in service not subject to this part qualifies for use under this part if the operator prepares and follows a written procedure to carry out the following requirements:

(1) The design, construction, operation, and maintenance history of the pipeline must be reviewed and, where sufficient historical records are not available, appropriate tests must be performed to determine if the pipeline is in a satisfactory condition for safe operation.

(2) The pipeline right-of-way, all aboveground segments of the pipeline, and appropriately selected underground segments must be visually inspected for physical defects and operating conditions which reasonably could be expected to impair the strength or tightness of the pipeline.

(3) All known unsafe defects and conditions must be corrected in accordance with this part.

(4) The pipeline must be tested in accordance with Subpart J of this part to substantiate the maximum allowable operating pressure permitted by Subpart L of this part.

(b) Each operator must keep for the life of the pipeline a record of the investigations, tests, repairs, replacements, and alterations made under the requirements of paragraph (a) of this section.

3. Section 192.452 is added to read as follows:

§ 192.452 Applicability to converted pipelines.

Notwithstanding the date the pipeline was installed or any earlier deadlines for compliance, each pipeline which qualifies for use under this part in accordance with § 192.14 must meet the requirements of this subpart specifically applicable to pipelines installed before August 1, 1971, and all other applicable requirements within 1 year after the pipeline is readied for service. However, the requirements of this subpart specifically applicable to pipelines installed after July 31, 1971, apply if the pipeline substantially meets those requirements before it is readied for service or it is a segment which is replaced, relocated, or substantially altered.

4. The table of factors in § 192.619(a) (2) (ii) is amended to read as follows:

§ 192.619 Maximum allowable operating pressure; steel or plastic pipelines.

- (a) * * *
(2) * * *
(i) * * *
(ii) * * *

Class location	Factors, ¹ segment—		
	Installed before Nov. 12, 1970	Installed after Nov. 11, 1970	Converted under sec. 192.14
1.....	1.1	1.1	1.25
2.....	1.25	1.25	1.25
3.....	1.4	1.5	1.5
4.....	1.4	1.5	1.5

¹ For offshore segments installed, uprated, or converted after July 31, 1977, that are not located on an offshore platform the factor is 1.25. For segments installed, uprated, or converted after July 31, 1977, that are located on an offshore platform or on a platform in inland navigable waters (including a pipe riser), the factor is 1.5.

* * * * *

5. The table of sections is amended by adding the following new headings:

Sec.

192.14 Conversion to service subject to this part.

192.452 Applicability to converted pipelines.

(49 USC 1672; 49 USC 1804; 49 CFR 1.53(a).)

Issued in Washington, D.C., on November 18, 1977.

L. D. SANTMAN,
Acting Director,
Materials Transportation Bureau.

[FR Doc. 77-33967 Filed 11-23-77; 8:45 am]

[From the Federal Register, February 16, 1978]

DEPARTMENT OF TRANSPORTATION,
MATERIALS TRANSPORTATION BUREAU,
Washington, D.C.

SUBCHAPTER D—PIPELINE SAFETY

[Amdt. 195-13; Docket No. OPSO 77-4]

PART 195—TRANSPORTATION OF LIQUIDS BY PIPELINE CONVERSION OF EXISTING PIPE-
LINES TO LIQUID SERVICE

Agency: Materials Transportation Bureau, Department of Transportation.
Action: Final rule.

Summary: This amendment permits a previously used steel pipeline to qualify for use in liquid service subject to Part 195 without meeting the design and construction requirements applicable to a new pipeline. The need for the amendment arises from changing transportation patterns for oil and gas in pipelines in the United States. For example, as new sources of oil become available and past gas sources decline, significant cost savings and environmental benefits are projected from the use of existing gas lines to carry oil.

At the present time, however, the Federal liquid pipeline safety standards require that any pipeline placed in liquid service after March 31, 1970 (July 31, 1977, in the case of certain offshore lines), must be designed and constructed in accordance with the applicable Federal safety standards. Although appropriate for newly installed liquid lines, this requirement is more stringent than necessary to provide for public or employee safety when applied to steel lines being converted to service subject to Part 195. It imposes an unnecessary regulatory burden on the future use of the nation's pipeline transportation systems.

Effective Date: March 17, 1978.

For further information contact: Frank E. Fulton, 202-426-2082.

Supplementary information: To alleviate the regulatory burden and the similarly undesirable effect of requiring operators of converted pipelines to obtain waivers from design and construction requirements, the Materials Transportation Bureau (MTB) has adopted alternative safety requirements governing the qualification of existing steel pipelines for service under Part 195. Under the new requirements, a carrier prepares and follows a written conversion procedure. The procedure must provide for visual inspection and historical review of the pipeline to identify actual or potential sources of failures. The review must be supplemented with appropriate tests, such as physical or chemical testing, where historical records are insufficient to judge the line's condition. Problem areas must be corrected, normally by repair, replacement, or other alteration. A pressure test must be performed to demonstrate that the structural integrity of the pipeline is sufficient for safe operation. Applicable corrosion control requirements must be met within 12 months after the pipeline is placed in service. Finally, the carrier must keep a record of the investigations, tests, and remedial measures conducted on the pipeline.

This amendment results from a Notice of Proposed Rulemaking (Notice No. 77-3) issued by the Office of Pipeline Safety Operations on April 4, 1977 (42 FR 18412, April 7, 1977). The Notice was based, in part, on a petition by the American Petroleum Institute to establish alternative requirements governing the safety of existing pipelines being converted to service under Part 195. Interested persons were invited to participate in the rulemaking proceeding by submitting written data, views, or arguments by May 13, 1977.

Notice 77-3 proposed that a new Subpart G be established in Part 195 to prescribe safety standards for the conversion of existing steel pipelines to service subject to Part 195. In conjunction with this proposal, the Notice proposed that § 195.402(d) be amended to exempt pipelines converted in accordance with Subpart G from the design and construction requirements of Part 195. In the final rules, however, for organizational simplicity, the substance of the proposed Subpart G relating to written procedures (§ 195.502(c)), recordkeeping (§ 195.502(d)), and structural integrity (§ 195.504(b)) is transferred to a new § 195.5. The substantive proposals relating to operation and maintenance (§ 195.506(a)) and maximum allowable operating pressure (§ 195.508) are deleted as duplicative of current requirements in Part 195 governing those subjects.

The current requirements would apply to any existing steel pipeline which qualifies for use under Part 195 in accordance with the new § 195.5. The substance of proposed § 195.506(b), which would have provided a 12-month leadtime for a converted pipeline to meet corrosion control requirements, also is transferred to § 195.5. The remaining provisions in the Notice are deleted as unnecessary as a result of the organizational change.

In adopting the final rules, MTB considered all the written comments received as a result of Notice No. 77-3. A discussion of the significant comments and recommendations and their relation to changes in the final rules follows. Changes intended for clarification of the substance of the proposal and editorial modifications which do not alter the proposal are not discussed.

There were nine persons who submitted written comments to the Notice: Two natural gas pipeline companies; one gas trade association; two petroleum trade associations; one State regulatory commission; one federal agency; and two liquid pipeline companies.

One commenter said that establishing the proposed conversion requirements in the form of a new subpart in Part 195 would create redundancies and be administratively costly for the industry. The organizational changes discussed above are intended to alleviate this problem.

Another commenter suggested that carriers be required to tell MTB when a proposed conversion would take place so the pipeline system could be monitored for compliance. MTB does not believe, however, that a notification requirement is needed at present for enforcement of the conversion procedures. If experience shows that such a requirement would be useful, it will be proposed in a future Notice of Proposed Rulemaking.

Similarly, it was suggested by one commenter that the government assume greater control over conversion projects by requiring that a carrier's procedures be submitted for government review before a project begins. MTB does not favor this regulatory approach which, in effect, would require carriers to obtain a government permit for each conversion project. The approach would create an additional burden on both government and industry that does not appear warranted by the safety problems involved in a steel pipeline conversion project. The safety of a converted pipeline can be provided through the establishment and enforcement of adequate general safety standards covering the full range of identifiable safety problems. The purpose of this rulemaking proceeding is to meet this objective.

A number of commenters were concerned about the proposal under § 195.504(b)(1) in the Notice that a conversion be "consistent" with Part 195. They interpreted this provision as requiring application of the design and construction requirements, although the purpose of Notice 77-3 was to avoid this result. To eliminate any possible confusion on the point, the provision is not included in the final rules for conversion.

Notice 77-3 proposed that pipelines being converted must be pressure tested in accordance with Subpart E of Part 195 except for pipelines tested similarly within the preceding 5 years. Two persons interested in offshore pipelines requested that the exception be broadened to include pipelines satisfactorily tested in accordance with the U.S. Geological Survey's Order No. 9. Another commenter argued that a 5-year time limit on prior testing would be arbitrary and unnecessary in light of the other relevant safety considerations. In contrast, one commenter argued there should be no exception from the testing requirement on grounds that the potential safety benefits would outweigh the additional cost of testing. This comment was adopted in the final rule and a new pressure test is mandatory for all converted pipelines. On further consideration of the issue, MTB decided that a pressure test is the best indicator of defects which may still exist in a pipeline, even though it otherwise appears in satisfactory condition. In other words, harmful damage to a pipeline occurring since it was last tested which might not be discovered by investigations alone probably would be detected by a new pressure test. In addition, a pressure test provides a valuable check on the quality of repairs or alterations made during conversion.

It was proposed that a converted pipeline be allowed 12 months' leadtime to meet the corrosion control requirements of Part 195. One commenter said that 12 months is not needed because the time available between planning and completing a conversion project could be used to meet the requirements. While this may be true for some pipelines, MTB believes the problems involved in corrosion control justify providing the 12-month period for compliance as a general rule. Also, the 12-month leadtime is consistent with the time allowed by § 195.242 for installing a cathodic protection system on newly constructed pipelines.

In proposing the 12 months' leadtime, Notice 77-3 did not discuss how the corrosion control requirements should apply. If the current requirements were applied, a converted pipeline constructed after the applicable date in § 195.402(d) would have to meet the corrosion control requirements of Subpart D, which apply to newly installed pipelines, as well as the applicable corrosion control requirements of Subpart F, which are binding on all pipelines subject to Part 195. Because of the problems of coating and cathodically protecting an existing pipeline, MTB believes that it would be unreasonable in most cases to require that a converted pipeline meet corrosion control requirements specifically applicable to newly installed pipelines. Thus, for purposes of corrosion control, converted lines should for the most part be treated similarly to pipelines existing when Part 195 was adopted. They should only be required to meet the corrosion control requirements of Subpart F. However, a few exceptions should apply to this rule. Pipeline segments which are replaced, relocated, or substantially altered during the conversion of an existing line can readily comply with requirements applicable to new pipelines. Also, segments which already meet these requirements before being converted to liquid service, such as a steel pipeline constructed in compliance with 49 CFR Part 192, should be required to maintain that level of safety. Of course, any new segment installed in conjunction with a converted pipeline must meet the corrosion control requirements governing a new line even though it is part of an overall conversion project. Accordingly, a new § 195.5(b) is established regarding the applicability of the corrosion control requirements of Part 195 to converted pipelines.

One commenter proposed that sections of converted pipelines located near road crossings, schools, hospitals, other buildings of public assembly, or populated areas should be required to comply with the current burial requirements of Part 195. This proposal was not adopted because in MTB's view and as indicated by accident reports filed under Subpart B of Part 195, the cost of compliance would overcome any possible safety advantages to be gained.

It was proposed by one person that any segment of a pipeline with a leak clamp be replaced to eliminate weak points before the pipeline is converted. This proposal was not adopted because a properly designed and installed leak clamp is not, by itself, an indication of a weak point in a pipeline. Furthermore, the required pressure testing would detect any faulty leak clamps. Under the conversion procedures, clamps of insufficient design or installation must be repaired or replaced before the pipeline is placed in service subject to Part 195.

Commenting on a provision in § 195.500 in the Notice, which provides that the Secretary must grant an approval for conversion of any pipeline not made of steel, one person suggested that State agencies be authorized to approve the conversion of intrastate pipelines. Despite the term "approval," this provision was not intended to establish an independent case-by-case process for qualifying the conversion of nonsteel pipelines to service subject to Part 195. It merely was intended to emphasize that the proposed conversion procedures were not applicable to the conversion of nonsteel pipelines. If such a pipeline does not meet the design and construction requirements of Part 195, the carrier involved would have to obtain from the Secretary a waiver from compliance with any requirements which are not met before the pipeline may be legally placed in operation. Since Part 195 does not contain any general provision governing waivers, it does not appear necessary to include such a provision specifically for the conversion of nonsteel pipelines. The provision is therefore deleted from the final rules. Moreover the proposed delegation of authority to State agencies, whether for approvals or waivers, appears to be unauthorized under applicable laws.

The Notice proposed that appropriate visual inspections be conducted to determine the integrity of a pipeline to be converted. One person suggested that visual inspections be limited to pipeline sections located above ground or water so that buried lines would not have to be uncovered and divers would not have to be used. This proposal was not adopted because, indeed, it is necessary to expose pipelines at appropriate locations or employ divers for inspections in order to assure the integrity of a pipeline being converted.

One commenter requested that the final rules be changed to clarify the concept of conversion. This request was made because it could be inferred from § 195.502(a) in the Notice that a carrier would have to carry out conversion procedures each time a pipeline which is designed and built to alternately carry gas and oil in dual service is changed from gas to oil service. Notwithstanding this inference, MTB did not intend that the procedures be mandatory in these situations. A dual of conversion. This request was made because it could be inferred from § 195.502(a) which qualifies for use under Part 195 because of certain "grandfather" pro-

visions, does not undergo "conversion" within the meaning of Notice 77-3. MTB believes that problem of interpretation is corrected in the final rules where it is clear that the conversion procedures only apply at the time an existing steel pipeline is readied for liquid service subject to Part 195. The procedures do not affect existing dual service lines which either were built in accordance with the design and construction requirements of Part 195 or are not subject to those requirements because they were readied for service Subject to Part 195 before the applicable effective date set forth in § 195.402(d). Also, under the new § 195.5, a carrier may convert an existing gas line to dual service.

PRINCIPAL AUTHORS

G. L. Mocharko, L. M. Furrow, and R. L. Beauregard.

In consideration of the foregoing, Part 195 of Title 49 of the Code of Federal Regulations is amended as follows, effective March 17, 1978.

1. Section 195.5 is added to read as follows:

§ 195.5 Conversion to service subject to this part.

(a) A steel pipeline previously used in service not subject to this part qualifies for use under this part if the carrier prepares and follows a written procedure to accomplish the following:

(1) The design, construction, operation, and maintenance history of the pipeline must be reviewed and, where sufficient historical records are not available, appropriate tests must be performed to determine if the pipeline is in a satisfactory condition for safe operation.

(2) The pipeline right-of-way, all aboveground segments of the pipeline, and appropriately selected underground segments must be visually inspected for physical defects and operating conditions which reasonably could be expected to impair the strength or tightness of the pipeline.

(3) All known unsafe defects and conditions must be corrected in accordance with this part.

(4) The pipeline must be tested in accordance with the Subpart E of this part to substantiate the maximum allowable operating pressure permitted by § 195.406.

(b) A pipeline which qualifies for use under this section need not comply with the corrosion control requirements of this part until 12 months after it is placed in service, notwithstanding any earlier deadlines for compliance. In addition to the requirements of Subpart F of this part, the corrosion control requirements of Subpart D apply to each pipeline which substantially meets those requirements before it is placed in service or which is a segment that is replaced, relocated or substantially altered.

(c) Each carrier must keep for the life of the pipeline a record of the investigations, tests, repairs, replacements, and alterations made under the requirements of paragraph (a) of this section.

2. Section 195.402(d) is amended to read as follows:

§ 195.402 General requirements.

* * * * *

(d) Except as provided in § 195.5, no carrier may operate any part of a pipeline system upon which construction was begun after March 31, 1970, or in the case of offshore pipelines located between a production facility and a carrier's trunkline reception point, after July 31, 1977, unless it was designed and constructed as required by this part.

3. The table of sections is amended by adding the following new heading:

Sec.

195.5 Conversion to service subject to this part.

(Sec. 6, Pub. L. 89-670, 80 Stat. 437, (49 U.S.C. 1655; 18 U.S.C. 831-835); 49 CFR 1.53.)

Issued in Washington, D.C., on February 10, 1978.

L. D. SANTMAN,
Acting Director,
Materials Transportation Bureau.

[FR Doc. 78-4302 Filed 2-15-78; 8:45 am]

II. COMPLIANCE/ENFORCEMENT

Question 1. What is OPSO's policy on compliance and Enforcement?

Answer. It is OPSO's policy that all gas pipeline operators comply with all applicable Federal gas pipeline safety regulations.

Question 1(a). How are operators selected for inspection?

Answer. Criteria used in selecting operators for inspection are leaks per mile of main, number of leaks per services, unaccounted for gas, percentage of coated pipe and percentage of cathodically protected pipe, and the number and type of accidents. Additional considerations in the selection of operators are systems having the most noncompliances and potential problems, date of prior inspections, travel schedules, and the availability of resources at both the Federal and State Commission level.

Question 1(b). How often are operators inspected?

Answer. There is no prescribed time interval between inspections. The operators are inspected as often as possible considering the number of OPSO inspection personnel available and selection criteria that identify operators that should be inspected.

Question 1(c). What does an inspection consist of?

Answer. An inspection varies with regard to whether inspecting design, construction, operation or maintenance. An inspection consists of going to the operators pipeline facility and querying personnel, inspecting pipeline facilities, reviewing records of periodic inspections and determining compliance with the regulations.

Question 1(d). When are penalty actions taken?

Answer. Any operator of a gas pipeline system who does not comply with a Federal safety regulation is sent an enforcement letter advising him of the noncompliance and that he is subject to a civil penalty and given an opportunity to say why a penalty is not appropriate. OPSO then evaluates the gravity of the violation, the size of the operator and his demonstration of good faith and determines if an assessment of penalty is appropriate.

Question 1(e). Are follow-up inspections made to ensure corrective action?

Answer. Follow-up inspections to ensure corrective action are made whenever practicable, taking into consideration the past history of the operators, the type of violation and future travel schedule.

Question 2. What is the State's policy on compliance and enforcement?

Answer. It is OPSO's policy for the States to implement a compliance program that assures that all gas pipeline operators comply with all of the Federal and State gas pipeline safety regulations.

Question 2(a). How are operators selected for inspection?

Answer. State gas pipeline safety inspectors are trained at the Transportation Safety Institute (TSI) to select operators for inspection based on the following criteria: leaks per mile of main, number of leaks per service, unaccounted for gas, percentage of coated pipe and percentage of cathodically protected pipe and the number of accidents. Additional considerations in the selection of operators are having the most non-compliance and potential problems, date of last inspection, travel schedules, and the availability of State resources.

Question 2(b). How often are operators inspected?

Answer. There is no prescribed time interval between inspections. OPSO encourages State agencies to inspect each operator at least once each year, or as often as possible considering the number of State inspection personnel available.

Question 2(c). What does an inspection consist of?

Answer. State gas pipeline safety inspectors are trained at TSI that an inspection consists of going to the operators pipeline facility and questioning personnel, inspecting selected pipeline facilities, reviewing records of periodic inspections and determining compliance with the regulations.

Question 2(d). Where are penalty actions taken?

Answer. States have differing procedures establishing when penalty actions are taken, but all States must consider the gravity of the violation, size of the operator and his demonstration of good faith and determine if an assessment of penalty is appropriate.

Question 2(e). Are follow-up inspections made to ensure corrective action?

Answer. Follow-up inspections are made whenever practicable by State inspectors, taking into consideration the past history of the operator, type of violation and future travel schedule.

Question 3. Please provide us the record of past OPSO compliance and enforcement actions, including:

Question 3(a). Number of inspections conducted.

Answer. 250 gas and 68 liquid inspections have been conducted by OPSO during the past two years.

Question 3(b). Number of violations recorded (breakdown by violations of operating requirement and violations of safety standards).

Answer. An enforcement case file is initiated against each operator in violation of one or more regulations. During 1976 and 1977 there were 221 files initiated for violations of the safety standards and 29 files initiated for violations of reporting requirements.

Question 3(c). Number of operators found in violation (break down the same way).

Answer. Two hundred fifty operators have been found to be in violation during 1976 and 1977. 221 violators of one or more regulations, 29 violators of reporting requirements.

Question 3(d). List of civil penalty assessments levied, criminal actions sought, injunctions sought:

- (i) Nature of violation.
- (ii) Date of violation.
- (iii) Amounts of penalties sought.
- (iv) Disposition/status of cases.

Answer. See accompanying table for civil penalty assessments levied. There were 0 criminal actions sought and 0 injunctions sought.

CIVIL PENALTY ASSESSMENTS,¹ 1976-77

Identification	Date of violation	Records	Operational	Both	Assessment	Disposition
CPF-2022-----	July 28, 1976-----			×	5,000	Pending DCC.
CPF-2024-----	Aug. 3, 1976-----		×		1,000	Do.
CPF-4021-----	Nov. 19, 1976-----		×		4,000	Do.
CPF-5002-----	Jan. 29, Mar. 2, 1976-----		×		2,000	Do.
CPF-5004-----	May 26, 27, 1976-----		×		3,000	Do.
FRI-506-----	Feb. 22, 1977-----	×			700	Collected \$700, Dec. 15, 1977.
FRI-507-----	Feb. 24, 1977-----	×			700	Pending DCC.

¹ July 1, 1975 to Dec. 31, 1976 initiated efforts to effect compromise settlements in lieu of penalty assessments.

Question 4. Please provide us the record of past State compliance enforcement actions including: (a) Number of inspections conducted; (b) Number of violations recorded (breakdown by violations of operating requirement and violations of safety standards); (c) Number of operators found in violation (break down the same way); (d) List of civil penalty assessments levied, criminal actions sought, injunctions sought: (i) Nature of violation, (ii) Date of violation, (iii) Amounts of penalties sought, (iv) Disposition/Status of cases?

Answer. (a) During 1976/1977 the States conducted 27,912 inspections.

(b) 11,971 violations were reported by the States to OPSO for 1976/1977.

(c) The number of operator found in violation is maintained in State files. This data is not accumulated by OPSO.

(d) State civil penalty assessments for 1976/1977—29; State criminal actions sought—unknown; State injunctions sought—unknown.

Question 5. Under the Natural Gas Pipeline Safety Act, Section 5(b) States are those acting as agents for OPSO with regard to interstate systems are required to report violations to OPSO for enforcement action. How many such violations have been forwarded to OPSO for enforcement? What States have forwarded these violations?

Answer. States with either 5(a) certification or a 5(b) agreement were provided an opportunity several years ago to serve as agents for inspection of interstate pipeline systems if they had been exercising such authority under State law when the Natural Gas Pipeline Safety Act was passed. There are presently 14 States acting as our interstate agents. The following States reported violations in 1976 and 1977:

Kentucky: 3 violations.
Arkansas: 279 violations.
Michigan: 2 violations.

Question 6. Have any cases ever been submitted to the Department of Justice for action?

Answer. No.

Question 6(a). If not, why not?

Answer. All of the present cases have been resolved by collection of a penalty, closing the case without a collection of a penalty, or they are still pending.

Question 6(b). If they have, what is their disposition/status?

Answer. No cases have been submitted to the Department of Justice.

Question 7. Should there be legislative changes allowing civil penalties against liquid pipeline operators?

Answer. While we agree that civil penalty authority would enhance our enforcement capabilities with regard to liquid pipelines, we have not finally determined the best legislative means to acquire that authority.

Question 8. What regulations do the operators have the greatest difficulties in complying with?

Answer. Operators have had the greatest difficulties in complying with the requirements for controlling corrosion on existing distribution lines.

Question 8(a). Why?

Answer. Cathodic protection of these pipelines has in some instances been difficult because of difficulties in conducting electrical surveys of facilities in certain downtown locations, the cost of installing cathodic protection, and the scarcity of qualified personnel in certain areas of the country.

Question 9. To what extent are there repeat violators of the Federal pipeline safety standards?

Answer. We have not made a study to determine the full extent of repeat violators. However, some of the small operators have repeated violations of the Federal pipeline safety standards.

Question 9(a). How does OPSO discourage this?

Answer. OPSO discourages repeat violations by considering such violations as indications of lack of good faith on the part of the operator. This factor is one of the elements taken into consideration in determining the level of civil penalty assessment.

Question 10. What does OPSO do to get compliance by the operator lacking the resources for the expertise to maintain his system according to the Federal standards?

Answer. OPSO assists the operator in complying with the regulations by encouraging him to participate in various industry and OPSO sponsored seminars, and training sessions. OPSO representatives also meet with officials of small gas systems in an effort to offer guidance in complying with the regulations. At the Department level an effort is being made to identify sources of Federal funds from the Department of Housing and Urban Development and the Department of Commerce which may be available to small operators for the purpose of upgrading their pipeline systems.

Question 11. How many LNG facilities (plants/storage) currently exist?

Answer. In the United States there are 113 LNG facilities of all types and sizes expected to be operational during 1978.

Question 11(a). How many have been inspected?

Answer. In 1977, the States and OPSO conducted over 200 inspections of over 50 facilities.

Question 11(b). How many violations of the standards have been noted?

Answer. No violation reports have been submitted as a result of these inspections.

Question 11(c). What enforcement actions have been taken against violators?

Answer. None.

III. STATE PROGRAMS

Question 1. What kind of guidance has been provided to State agencies for conducting their programs? What guidance to States acting as agents for inspection of interstate lines?

Answer. Each state participating in the OPSO State program has been individually assisted in setting-up its gas pipeline safety program. This included reviewing the requirements for conducting a State program as outlined in section 5 of the Natural Gas Pipeline Safety Act of 1968, recommending inspection and recordkeeping procedures and the purchase and use of safety equipment. Each State program is completely monitored and evaluated annually with an on-the-scene program review including evaluation of its field inspection procedures. In addition, detailed technical training in conducting gas safety inspections is conducted for State agency personnel at the Transportation Safety Institute (TSI) in Oklahoma City. A comprehensive procedural manual for the proper accounting and documentation of State expenditures related to the grant-in-aid program was distributed to the State in 1976. A similar State guide addressed to conducting a gas pipeline safety program is being developed and will be completed and distributed later this year. The States serving as interstate agents have received guidance in conducting their inspection programs in the enforcement and regulations course conducted at TSI.

Question 2(i) a. How often should inspections be made?

Answer. There is no prescribed time interval between inspections. OPSO encourages State agencies to inspect operator at least once each year or as often as possible considering the number of State inspection personnel available.

Question 2(i) b. What should be addressed during an inspection?

Answer. A list of target regulations has been provided to students attending our technical training program. These address specific regulations for which States should conduct their inspection. It also provides guidance on the type of information necessary to establish a non-compliance action.

Question 2(i) c. Should inspection checklists be used?

Answer. Yes, inspection checklists should definitely be used.

Question 2(i) d. Should it establish priorities as to which operators need the most attention?

Answer. Yes, priorities should be established as to which operators need the most attention. We provide criteria to the States in our training program at TSI i.e., leaks per mile of main, number of leaks per service, unaccounted for gas, percentage of coated pipe and the percentage of cathodically protected pipe, and the number and type of accidents.

Question 2(i) e. Should it establish priorities as to which regulations should be emphasized?

Answer. Yes, it should establish priorities as to which regulations should be emphasized. Note (b).

Question 2(ii) a. What form should the violation notification take?

Answer. The notification should always be written.

Question 2(ii) b. When should penalty actions be initiated?

Answer. The appropriateness of initiating a penalty action is determined after considering criteria established by statute, the size of the operator, the gravity of the violation and the level of good faith.

Question 2(ii) c. When should follow-ups be done?

Answer. Follow-ups on penalty actions should be done as soon as an operator indicates corrective action will be completed.

Question 2(iii) a. What qualifications are required of State inspectors?

Answer. State inspectors are required to be either degreed or experienced and capable in conducting gas pipeline safety inspections. State inspector qualifications are listed on the OPSO check-forms used when State inspection is conducted.

Question 2(iii) b. What is a good ratio of inspectors to operators?

Answer. A good ratio of inspectors to operators is 18.

Question 3. What is your criteria for re-certifying State agencies?

Answer. The Natural Gas Pipeline Safety Act of 1968, (the Act), established the criteria for certifying States into the program. Each year, States desiring to be recertified are required to submit an annual certificate to the Secretary of Transportation stating:

1. It has regulatory jurisdiction over the safety standards and practices of any or all intrastate pipeline transportation within the State.

2. It has adopted each Federal safety standard applicable to the intrastate pipeline transportation under its jurisdiction.

3. It is enforcing each standard, and the State laws must provide for the enforcement by injunctive and monetary sanctions substantially the same as Section 9 and 10 of the Act.

4. It is encouraging and promoting programs designed to prevent damage to pipeline facilities as a consequence of excavation activity.

5. It has authority to require each person who engages in the transportation of gas or who owns or operates pipeline facilities subject to its jurisdiction as set forth in paragraph 1, to establish and maintain records, to make reports and to provide information, and that this authority is substantially the same as the authority provided in Section 12 of the Act.

6. It has authority to require each person who engages in the transportation of gas or who owns or operate pipeline facilities, subject to its jurisdiction, to file with it for approval a plan for inspection and maintenance substantially as described in Section 11 of the Act.

In addition, the State agency Certification must include:

(a) A listing of the types of intrastate gas facilities not included in the State's safety regulatory jurisdiction.

(b) A current list containing the name and address of each person engaged in the operation of pipeline facilities or the transportation of gas subject to the safety jurisdiction of the State agency.

(c) A statement of all accidents reported to it during the previous twelve months by an operator involving (a) personal injury requiring hospitalization, (b) fatality, or (c) property damage exceeding \$1,000 together with a summary of its investigation as to the cause and circumstances surrounding such accident or incident.

(d) A summary of the State's inspection, compliance and enforcement actions taken in the preceding calendar year.

(e) A listing of the records the State agency maintained pertaining to its gas pipeline safety program, during the preceding calendar year to enforce compliance with the gas pipeline safety standards, and a listing of the gas pipeline safety reports the State agency required from operators (over which it had safety jurisdiction).

(f) The name, title, and approximate percentage of time State employees are involved in the gas pipeline safety program.

Question 4. Are there States that do not have adequate programs?

Answer. Yes, there are several States that do not have adequate programs.

Question 4(a). What are you doing to get them to develop better programs?

Answer. In States having deficient programs, the Office of Pipeline Safety Operations has intensified its effort to raise these States' programs to what we believe to be an acceptable level. This effort has included advising and working with the State agency personnel in upgrading their program, increased monitoring of the adequacy of the program, and correspondence to the Chairman of the Commission of each State agency indicating deficiencies in its program and OPSO's recommendations for corrective action. In addition, training for the State personnel at TSI will help develop better State pipeline safety programs.

Question 4(b). Have you ever de-certified any of these States?

Answer. We did not accept the application from the District of Columbia for approximately 6 months in 1976.

Question 5. Are States monitoring all facilities they have jurisdiction over?

Answer. Most States use selective sampling techniques in conducting their inspection program. The State's gas pipeline safety supervisor selects the facilities to be monitored, taking into account the advisability of periodically inspecting every operator and the priority of inspecting systems with greater risk potential. Although States inspect virtually every operator annually, it is impossible to monitor all gas facilities each year.

Question 6. Where State programs are inadequate, is this because they legally lack such authority?

Answer. OPSO has accepted a State agency certification under Section 5(a) or 5(b), to the extent the State agency had safety regulatory jurisdiction over intrastate gas facilities pursuant to State statutes, recognizing that all other intrastate gas facilities, such as master meter systems, municipally owned systems, etc., within that State would remain under the direct safety regulatory responsibility of the DOT until corrective State legislation might be enacted. However, even though the extent of State authority may not be as broad as the Federal authority and this factor is taken into consideration in evaluating the State program, this factor alone does not make a State program inadequate.

Question 6(a). What is OPSO doing to get them to seek such jurisdiction?

Answer. Over the years, OPSO has encouraged the enactment of appropriate State gas pipeline safety legislation, so each participating State agency can exercise safety regulatory jurisdiction over all of the intrastate gas facilities within the State. In this connection, OPSO has written numerous letters to the Chairman of the State agency encouraging the agency to seek or support the necessary legislation for complete jurisdiction. OPSO has also testified before State legislatures to promote this legislation. OPSO Regional and Headquarters staff have had personal contacts with State agency officials stressing the importance of complete jurisdiction at the State level. Several States have broadened their jurisdiction as a result of this effort, although, in other States OPSO has had limited success.

Question 6(b). If they have the authority, what is OPSO doing to get them to accept it?

Answer. During 1976/1977 there were only two States, Alaska and Louisiana, which were not exercising all of their jurisdiction. We strongly encouraged these States to exercise their full jurisdiction.

Question 7. How does OPSO assure that States are encouraging and promoting programs designed to prevent damage to pipeline facilities as a consequence of excavation activity?

Answer. During OPSO's periodic evaluations of the States' gas pipeline safety programs, OPSO Regional personnel assess the States' activity in this area. In addition, States participating in the 5(a) certification program must assure OPSO in the certification form that they are actively working for an outside force damage program.

Question 7(a). Are all States doing so?

Answer. Yes.

Question 8. Is greater attention given to those States where there seem to be an inordinate number of problems in the State programs themselves or where there are high leak or accident rates?

Answer. Yes, our Regional Offices devote more time to the problem States or where there are high leak or accident rates. For example, States that have received a great deal of attention include:

Nebraska, Minnesota, South Dakota, and Alaska.

IV. DATA

Question 1. Specifically, how is accident data and annual operator report data used in conducting your program?

Answer. Accident data and annual operator report data are utilized in furnishing information to establish rulemaking priorities, in assisting the development of technical justification for the revision or issuance of regulations, and in identification of operators and pipeline systems for inspections.

Question 1(a). Are systematic analyses carried out to identify problems and weaknesses?

Answer. Data bank information was used by the University of Oklahoma in performing an OPSO sponsored R. & D. study to analyze this data. The analysis of this data identified the following problem areas: the extent of the effect of corrosion of pipelines, the damage caused to existing pipelines during excavation or construction projects, and the high rate of failure in plastic pipelines as compared to pipelines of other materials.

Question 1(b). Are data analyses supplied to States in conducting their programs?

Answer. Summary sheets of accident data are available but not routinely supplied to States to aid them in conducting their pipeline safety programs. In addition, the R. & D. study analysis of the accident and annual report data conducted by the University of Oklahoma was supplied to the States.

Question 2. Is the data submitted by operators and States verified for accuracy?

Answer. Because of a vacancy in the data analyst position for over 1½ years some of the 1976-1977 data was not verified. That position has been filled, and we plan to resume verification of this data in the future. In those instances that the operators are required to submit their reports to OPSO through the State Commissions, verifications by OPSO are conducted on a cursory basis.

Question 2(a). Is this a problem?

Answer. An apparent lack of accuracy of data generally results from a misunderstanding of the reporting instructions and is common among small operators with limited staff. OPSO is presently revising the reporting forms and the filing instructions to further improve this situation.

Question 3. Why aren't detailed accident reports required from the more than 90 percent of gas distribution system operators?

Answer. The gas operators which are exempt from filing written leak reports, those having less than 100,000 services, serve less than 15 percent of the total gas customers in the country. When this reporting requirement was promulgated, it was determined that gathering this information from those operators that serve more than 85 percent of the gas users in the country would provide sufficient statistical data and not cause a reporting burden upon the small operators.

Question 4. Why aren't annual reports required from liquid pipeline operators?

Answer. An accident reporting form for liquid pipelines was established by the Federal Railroad Administrator on November 9, 1967, for the purpose of gathering accident information on liquid pipelines. A need for an annual report was not recognized at that time. The accident data has been summarized annually and distributed to the industry for each year beginning in 1968 by the Office of Pipeline Safety Operations.

The value of the annual reporting form for gas operators in reporting data on various operators correlating with accident statistics and evaluating safety trends has pointed up a need to establish a similar annual report for liquid pipeline carriers. A proposed form has been drafted for bringing before the public for comment.

V. PERSONNEL/RESOURCES

Question 1. When do you expect to have a permanent Director on board?

Answer. In the near future.

Question 2. Breakdown of OPSO personnel currently on-board:

Question 2(a). Breakdown of OPSO personnel currently on-board in Washington by professional and clerical.

Answer. There are currently 15 professional and seven clerical personnel on-board in the Washington Headquarters.

Question 2(b). Breakdown of OPSO personnel currently on-board in field offices by professional and clerical.

Answer. There are nine professional and five clerical personnel on-board in OPSO field offices. (Attached is a breakdown of on-board professional and clerical personnel by program area and by Headquarters and field.)

OPSO ON-BOARD PERSONNEL

Program areas	Washington		Field		Total
	Profes- sional	Clerical	Profes- sional	Clerical	
State program.....	3	1	3	2	9
Regulation development program.....	5	2			7
Operator compliance and enforcement program.....	3	1	6	3	13
Information and industry liaison program.....	1	2			3
Technology investigation and assessment program.....	4	1			5
Total on-board OPSO staff.....	15	7	9	5	37

Question 3. Are your current resources (funds and personnel) sufficient to adequately carry out all of your responsibilities?

Answer. With the additional resources requested for fiscal year 1979, there should be adequate staffing and funds to carry out an effective and orderly development of a pipeline safety program.

Question 3(a). Where are they not sufficient?

Question 3(b). How much/many more do you need?

Answer. The fiscal year 1979 budget, now before Congress, requests the following significant increases: (1) an increase of eight staffing positions to monitor the design, construction, and operation of the Alaska natural gas pipeline; (2) one additional position for developing Federal safety standards for liquefied natural gas, anhydrous ammonia, and other volatile or toxic hazardous liquid pipelines, stress corrosion, and plastic pipe; (3) an increase of \$1.8 million to support the Alaska pipeline project; and (4) an increase of \$.44 million for grants-in-aid to strengthen the pipeline safety programs of participating States.

Question 4. How about grades of senior OPSO personnel? Is grade GS-15 appropriate for director of a national program such as the Office of Pipeline Safety Operation?

Answer. We are presently trying to upgrade the position of the director of this program.

VI. MISCELLANEOUS

Question 1. Technical Pipeline Safety Standards Committee (TPSSC).

Question 1(a). What are the present plans for the Committee?

Answer. The Administration has proposed that this Committee, among other Federal Advisory Committees, be eliminated in the interest of government efficiency. Last session, two bills—S. 2088 and H.R. 8951, were introduced to make the necessary legislative changes. So far, the respective government operations committees have not taken any action on the bills.

Meanwhile, the Committee continues to function as required by the Natural Gas Pipeline Safety Act of 1968.

Question 1(b). Has the TPSSC ever reported negatively on a proposed regulation which was subsequently issued?

Answer. There have been many instances where the TPSSC has recommended changes to proposed regulations that were not adopted when the final rules were issued. For instance, in Notice 75-5 (40 FR 45192, Oct. 4, 1975), OPSO proposed to delete certain exceptions for offshore pipelines in existing requirements.

regarding testing and installing test stations. The TPSSC recommended against deletion of the exceptions, basically on grounds that it would be difficult for offshore lines to meet the requirements in all cases. The Materials Transportation Bureau disagreed, and the final rule was adopted as proposed (41 FR 34598, August 16, 1976).

Question 1(c). Has TPSSC formally proposed any safety standards?

Answer. In 1976, the TPSSC proposed that a corrosion control monitoring standard be amended to eliminate the requirement for electrical testing in urban areas. The proposal was not adopted by OPSO because the suggested amendment would not have achieved the objective of the standard.

Recently, at the request of OPSO, the TPSSC has begun a program of systematically evaluating all the existing gas pipeline safety standards to determine if changes are needed. During the course of this evaluation process, the TPSSC will have an opportunity to recommend new standards for adoption. As part of this program, at a meeting in Washington, D.C., on January 17 and 18, 1978, the TPSSC recommended that 11 of the corrosion control requirements should be changed for various reasons.

Question 2. What is the status of the implementation of the memorandum of understanding between the Department of Transportation and the Department of the Interior regarding offshore pipelines? Has DOI stopped setting safety standards as a condition of granting pipeline rights of way on offshore lands?

Answer. The Memorandum of Understanding (MOU) between the two Departments is being implemented. Although DOI is not overtly applying its safety standards to pipelines which are DOT's responsibility under the MOU, we believe that its New Orleans field office is still exercising tacit control over safety during the permitting process.

For instance, at least one company doing business offshore has complained that DOI's New Orleans office exerts pressure through the regulated producers to require DOT pipelines and producer platforms to meet DOI standards. These small offshore segments are specifically exempt under the MOU from DOI regulation. In other cases, we understand that the New Orleans office may delay the granting of right of way permits until certain safety measures are taken which may go beyond DOT requirements. In addition, DOI continues to attach area specific safety conditions to lease sales which become binding on future pipelines that are DOT's responsibility.

Question 2(a). How many such operators are there?

Answer. We are in the process of obtaining this information.

Question 2(b). How many miles of pipelines are involved?

Answer. Approximately 15,000 miles.

Question 2(c). What monitoring is being done? By whom?

Answer. Offshore inspections were initiated in 1977. In 1978, one-half a man-year will be devoted to inspection of offshore pipelines. These inspections are being conducted by one of the engineers in the Southwest Regional Office in Houston.

Question 2(d). How many cases of noncompliance have been found?

Answer. None.

Question 2(e). Are there problems with offshore lines?

Answer. There are no problems that we have definitively identified.

Question 2(f). Are additional personnel needed to monitor these lines?

Answer. One of the engineers presently being hired as a result of the FY 78 authorization will be used to monitor these lines.

Question 3. What is OPSO doing or planning to do regarding the proposed Alaska natural gas pipeline?

Answer. OPSO has been active in a number of Alaska gas pipeline safety matters during 1977 and 1978. Under the Alaska Natural Gas Transportation Act (ANGTA) of 1976, the Department forwarded comments to the Federal Power Commission (FPC) on the FPC Administrative Law Judge's Alaska Gas Decision. We joined in the Federal interagency review of the FPC Recommendation to the President and took a leading role in two of the 10 specific issue reports that went to the President—those on Safety and Design and on Construction Delay and Cost Overruns issues. We also provided technical input for the President's Decision and Report to Congress on the selection of an Alaska natural gas transportation system and drafted proposed terms and conditions and planning guidelines for the Federal Inspector activities under the ANGTA. Since November, we have held several meetings with other Federal agency officials and our Canadian counterparts to carry out the joint responsibilities for testing and evaluating

pipe for a Canadian section of the pipeline in accordance with the agreement between the U.S. and Canada on principles for the northern natural gas pipeline. The U.S. views were forwarded to the Canadian National Energy Board on February 13.

The operators of the Alaska natural gas pipeline are currently involved in environmental studies, preliminary system design, test programs to determine presence of rock and stability of soils and permafrost, and pipeline burst tests. Our OPSO staff is reviewing these advance plans. We also are monitoring the preconstruction activities of the operators, establishing design criteria and test procedures, evaluating the results of such efforts, and determining the acceptability of engineering design work.

Question 3(a). Is anyone currently working on this issue? Doing what?

Answer. Beginning in February 1977, OPSO assigned a staff engineer the responsibility for oversight on the Alaska natural gas pipeline. Another engineer who had previously been involved extensively in the Alaska crude oil pipeline assisted in that effort. In January this year, OPSO established an Alaska Pipeline Project with the above staff engineer assigned to head that Project; the engineer who had been assisting on the Project (as well as carrying out Alaska crude oil pipeline assignments) was also assigned to the Alaska Pipeline Project full time. A secretary completes the Alaska Pipeline Project team. The Alaska Pipeline Project has responsibility for the OPSO Headquarters' oversight of the Alaska natural gas pipeline and for continuing functions on the crude oil pipeline. The Chief of the Western Region continues to have responsibility for field surveillance of the TAPS line. The Project staff are the same personnel who have been carrying out the assignments mentioned above during the past year and that work continues.

Question 3(b). Will additional people be requested to monitor its construction?

Answer. Our many activities devoted to the Alaska natural gas pipeline this past year have convinced us of the importance of moving forward with inspecting the design, construction, and operation of that line to assure compliance with DOT gas pipeline safety standards. To meet these responsibilities which Congress has set out in the ANGTA, and further developed in the joint resolution approving the President's decision, we must prepare now with needed staffing and funding.

OPSO has requested additional people to monitor the Alaska gas pipeline construction as well as the preliminary engineering design. Beginning in early 1978 with the review of preliminary design and testing, the monitoring will continue throughout the life of the project to mid-1983. We are requesting an increase of eight positions to continue at an expanded level the initial monitoring begun in fiscal year 1978 and to initiate a program for the effective review of the detailed pipeline design. These functions will be executed through a DOT Alaska pipeline task force of eight OPSO employees, consultation with experts in highly specialized areas of pipeline technology, and expanded contractor furnished services. We also plan to use contractor furnished services to review preliminary engineering design work; for consultation in areas such as burst tests, permafrost studies, and metallurgy where there is insufficient inhouse capability; and to monitor field construction.

Question 4. What is the status of any proposed Deepwater Ports?

Answer. There is currently only one proposed Deepwater Port under design—that being LOOP in offshore Louisiana.

Question 4(a). What is OPSO doing or planning to do in this area?

Answer. OPSO has the safety regulatory authority over the pipeline from the mooring facilities to the shore facilities and the existing safety regulations issued by OPSO include requirements for offshore pipelines. OPSO reviews the portion of the design relating to pipelines and submits comments and recommendations to the Office of Deepwater Ports.

OPSO has recently completed a study (February 1978) on "Offshore Pipeline Facility Safety Practices." The results of that study will be used to aid in the determination of the need for additional or revised offshore safety standards.

Question 4(b). Will additional people be needed?

Answer. The person power needed for the additional work required for the deepwater ports has been considered in FY-78 budget requests.

Question 5. Regarding pipelines on Federal lands, what standards are required to be followed?

Answer. Pipelines on Federal lands owned or operated by private carriers must comply with the applicable Federal pipeline safety standards, 49 CFR Part 192 and 49 CFR Part 195. All significant failures on pipelines owned or

operated by private operators or carriers are subject to the reporting requirements of Parts 191 and 195; however, the existing data collection forms do not indicate which of the reported leaks, if any, occurred on Federal lands. Consequently, OPSO is in the process of amending the reporting forms and requirements of Parts 191 and 195 in order to identify via revised data collection forms which of the reported leaks, if any, occurred on Federal lands.

In regard to pipelines owned or operated by Federal agencies on Federal lands, OPSO has no safety regulatory authority over these agencies or facilities other than having the Federal agencies advise us of leaks or potential leaks in accordance with subsections 28(w)(3) and (4) of the Mineral Leasing Act of 1920, as amended.

Question 5(a). Are there any problems with these pipelines?

Answer. With regard to pipelines owned or operated by private operators or carriers, OPSO will not have available information until the official approval and submittal by operators of the revised data collection forms, probably in 1980.

With regard to pipelines owned or operated by Federal agencies on Federal lands, information received by OPSO indicates that the number of pipeline facilities owned or operated by Federal agencies is extremely small in comparison with the total mileage of privately owned pipelines and that pipeline safety has not been a significant problem with these Federally owned facilities.

Question 6. Did OPSO's heavy involvement in the trans-Alaska oil pipeline create difficulties in carrying out its other pipeline safety responsibilities?

Answer. In 1976 and 1977, OPSO's involvement in the trans-Alaska crude oil pipeline resulted in about 40 percent of the total field force inspection time allocation being diverted from the lower 48 inspection assignments to the Alaska project.

Question 6(a). If so, were requests for additional resources considered?

Answer. When it became apparent that OPSO's deep involvement would be required, consideration was given to obtaining additional resources. However, because there was insufficient time to request additional resources and because personnel with the required pipeline expertise and familiarity with DOT pipeline safety regulations would be difficult to find, we decided to redirect the efforts of OPSO's staff.

In addition, we utilized existing expertise within DOT and outside the Department to assist OPSO in evaluating the welds on the trans-Alaska crude oil pipeline. Radiographic specialists from the Coast Guard were used to interpret radiographs of girth welds and inspect welding during the construction of the pipeline in 1976. They also assisted in the interpretation of radiographs during the statistical sampling of 1,500 main line pipeline welds checked to determine compliance with the DOT pipeline safety regulations, and the audit of girth welds made at the Valdez terminal (again checked to determine compliance with the regulations). Specialists in metallurgy and fracture mechanics within DOT assisted OPSO during the evaluation of the waiver requests on the pipeline concerning substituting fracture mechanics for the DOT pipeline safety regulations to determine acceptability of welds found not to comply with the DOT welding standards. A panel of five persons outside of DOT expert in fracture mechanics and testing, metallurgy, welding, and nondestructive inspection also assisted in this evaluation.

Question 7. Please provide a list of R&D studies completed/underway (with planned completed dates) and costs.

Answer. Following is a list of contract studies that have been completed or are in progress since January 1976:

Study	Cost	Status
Transportation of highly volatile, toxic, or corrosive liquids by pipeline.....	\$115,000	Completed March 1976.
Evaluate overall safety of gas distribution systems.....	29,500	Completed June 1976.
Study of offshore pipeline safety technology.....	250,000	Completed February 1978.
Investigation of characteristics of LNG vapor cloud dispersion on water.....	50,000	In progress summer 1978.
Environmentally induced cracking in pipelines.....	212,000	Completed February 1978.
Evaluate effectiveness of outside force damage prevention programs.....	70,000	Completed January 1978.
Development of criteria for LNG standards.....	10,000	Completed June 1976.
Evaluate welding on Trans-Alaska Oil Pipeline.....	410,000	Completed 1977.
Evaluate radiographs on Trans-Alaska Oil Pipeline.....	50,000	Do.
Revise and develop leak reports.....	4,500	Completed December 1977.
Evaluate design criteria of VSM's on Trans-Alaska Oil Pipeline.....	35,000	In progress spring 1978.
Develop criteria for use of fracture mechanics to evaluate pipeline welds.....	200,000	In progress 1980.

Question 7(a). Provide specific actions taken as a result of each of these studies.

Answer. The Department is using the results of these studies to improve the gas and liquid pipeline safety standards and to ensure compliance with the existing pipeline safety standards. The liquid pipeline safety regulations (49 CFR Part 195) are in the process of being revised to incorporate more definitive requirements over liquid pipelines transporting more volatile liquids using the information in the study on the "Transportation of Highly Volatile, Toxic, or Corrosive Liquids by Pipeline," completed in March 1976. The results of the two studies concerning liquefied natural gas (LNG) are being used to develop more comprehensive LNG safety standards. An Advance Notice of Proposed Rule Making on these standards was issued on April 14, 1977 (42 FR 20776-20800, April 21, 1977). Comments are presently under review by the Department.

The three contracts concerning the trans-Alaska crude oil pipeline were done to ensure compliance with the liquid pipeline safety standards. The study on the overall safety of gas distribution systems was used in developing revised emergency procedures and reporting requirements for gas pipeline safety regulations (49 CFR Part 192). It is being used by industry to guide them in developing effective maintenance procedures and is being used to evaluate the need to change other specific requirements of Part 192. The other contracts that have just been completed are now being reviewed by the OPSO staff for determination of the need for future action.

Question 8. What is the volume of natural gas and liquid commodities lost annually as a result of pipeline leaks and accidents?

Answer. A summary of the liquid leak reports made to OPSO under the criteria defined in the regulations indicates that for the five year period 1972 through 1976 the average annual spill was 321,824 barrels. Data is not available to indicate the amount of spillage which was recovered from the environment.

Leaks of natural gas are not quantified in a similar manner. Since natural gas is lighter than air and consequently dissipates it cannot be measured. We do not request this information from natural gas operators since the location of leaks in gas pipelines does not lend itself to measuring the loss of natural gas. The percent of unaccounted for gas reported by the operators in the annual report is influenced by meter miscalibration, and temperature and atmospheric condition variations and therefore does not represent loss of gas.

Question 9. There are many thousands of master meter operators across the Nation.

Question 9(a). Are they a problem?

Answer. These operators are a problem in that often they do not have the resources or technical capabilities needed to fully comply with the Federal safety standards. Also, because there are so many of them, it has not been practical for OPSO or those States with jurisdiction to carry out an effective compliance program.

Question 9(b). What is OPSO or the States doing to ensure the safe operations of these systems?

Answer. To ensure safe operation. OPSO and State field compliance personnel have met with master meter operators or their representatives to explain the Federal safety requirements and methods of compliance. OPSO also has assisted the Department of Housing and Urban Development in the preparation of a gas safety manual for HUD projects. In addition, those States who cooperate with OPSO in sponsoring industry training seminars are encouraged to invite interested master meter operators to attend.

Question 9(c). What can or should be done with these systems? Should their safety regulation be left to the States?

Answer. We believe that the safety of master meter systems is a local problem which can be handled better by the States than the Federal government. OPSO has long encouraged States without jurisdiction to obtain it, but there are still 20 States who lack appropriate regulatory authority. In these States, OPSO now is exploring the possibility of entering into agency relationships under Sec. 5(b) of the Natural Gas Pipeline Safety Act of 1968 to assist in carrying out surveillance and compliance duties.

Question 10. Many of the small gas pipeline operators apparently do not have the financial resources to upgrade their systems to meet safety standards.

Question 10(a). Are there any Federal/State loan or grant programs available for this purpose?

Question 10(b). If so, what is OPSO doing to direct operators to such programs? Answer. The Department has sought the assistance of the Departments of Commerce and Housing and Urban Development to make available, under programs which they administer, loans or grants to assist municipalities in repairing or replacing their deteriorating pipeline systems. Copies of the letters to the Departments of Commerce and Housing and Urban Development are attached.

U.S. DEPARTMENT OF TRANSPORTATION,
RESEARCH AND SPECIAL PROGRAMS DIRECTORATE,
Washington, D.C., February 13, 1978.

Action: Transmittal of Letters to the Departments of Housing and Urban Development and Commerce.

From: John J. Fearnside, Acting Director, Research and Special Programs Directorate.

To: The Secretary.

Through: The Deputy Secretary.

A number of small municipalities own and operate natural gas distribution systems. Recently, increased inspection activities by the Office of Pipeline Safety Operations (OPSO) have revealed that many of these small municipally-owned gas systems are physically deteriorated and that the owning municipalities lack the financial wherewithal to restore them. These problem systems are located principally in the south and southwest.

The two attached letters to the Secretaries of Housing and Urban Development (HUD) and Commerce respectively request their assistance in correcting the situation. More specifically, the letter to Secretary Harris requests some minor adjustments in the administration of HUD's discretionary community block grant program so as to place these small municipalities on an equal footing with other applicants. The letter to Secretary Kreps offers OPSO expertise to Commerce when economic development assistance is made available by that Department for renewal of a town's natural gas distribution system. In both cases, there has been considerable advance staff level contact to prepare the way for the letter.

In essence, we are trying to help those we have a responsibility for regulating to find the resources necessary to make their systems safer.

I recommend you sign the letters.

Approved:

BROCK ADAMS,

Secretary.

JOHN J. FEARNSIDES,
(for the Deputy Secretary.)

Concur:

February 13, 1978.

FEBRUARY 15, 1978.

HON. JUANITA M. KREPS,
Secretary of Commerce,
Washington, D.C.

DEAR MADAM SECRETARY: I would like to propose a cooperative approach to a problem of immediate concern to the Department of Transportation, but which in a broader sense concerns both of our Departments.

The Natural Gas Pipeline Safety Act of 1968, places in the Secretary of Transportation responsibility for fostering public safety in the transportation by pipeline of natural gas. To carry out this responsibility our Office of Pipeline Safety Operations (OPSO) has established Federal gas pipeline safety standards, and carries out an active enforcement program to monitor compliance with these standards.

There are a number of small municipalities which own and operate natural gas distribution systems. Our inspections of these systems have revealed that many of them fail to meet minimum safety standards due to serious and widespread physical deterioration. For the most part, these systems are located in the southern and southwestern parts of the United States. When our inspection reveals that a municipal gas system does not comply with Federal gas pipeline safety regulations, the town's executive officer is given notice of the noncompliance and advised of the town's liability for a civil penalty. In many cases, the responsible legal officials have stated that their towns are not financially able to pay a penalty, and even more disturbing, these officials also assert that they do not have the resources to repair or replace their unsafe pipelines.

Your Department, through the Economic Development Administration (EDA), carry out the operative provisions of the Public Works and Economic Development Act of 1965. As we perceive the purpose of that Act, it is to help restore the continued health of areas burdened with unemployment and low family income. We understand that direct grants are made to States and local communities in the following respects: Title I, for public use and the development of facilities needed to attract new industry and encourage business establishment; Title III, for providing technical assistance for solving problems in economic growth; and Title IX, to assist in redressing actual or threatened economic adjustment problems, particularly where sudden and severe relocation will result in unemployment.

It appears that such DA administered grants could well serve to assist small municipalities that own and operate unsafe gas distribution systems. The appropriateness of such EDA assistance rests on the recognition that the safety of life and property and the continuance of job opportunities are clearly in jeopardy unless gas leakage from deteriorated systems is corrected. In support of this proposal, we believe that the technical expertise of our OPSO could be of assistance to EDA in the following manner:

1. The OPSO field representative, when questioned by officials of small municipalities about upgrading their gas distribution systems, could advise them of the possible applicability of the EDA's assistance programs. The OPSO personnel could then recommend that the local authorities contact EDA's State representative for further information.

2. When an application for EDA assistance is made in order to upgrade a gas distribution system, OPSO could provide assistance to EDA in determining the scope of the problem. This assistance could include, but need not be limited to, OPSO participation in a three party meeting of the applicant, the EDA representative, and the OPSO representative familiar with the region, in order to determine the nature and extent of the applicant's gas distribution problem.

3. In addition, OPSO can assist EDA in its setting of grant performance standards for particular municipal systems which would be consistent with Federal gas pipeline safety regulations.

4. The OPSO will, in any case, continue periodic inspections of all municipal gas systems under its jurisdiction to ensure compliance with Federal safety regulations. Copies of OPSO inspection reports could be sent to EDA for those systems where EDA assistance has been furnished.

An additional benefit of EDA/OPSO cooperation could be the development of a method for reviewing and evaluating the results of EDA grants. A notable example of this potential is Scottsville, Kentucky. This community received a \$550,000 grant and a \$350,000 loan from EDA a few years ago in order to replace the pipelines in the town's gas distribution system. On July 28, 1976, an OPSO field representative conducted an onsite evaluation of Scottsville's records and pipeline facilities. There were ten (10) significant violations of pipeline safety regulations. These violations were principally in matters pertaining to periodic maintenance and system administration. Consequently, Scottsville may be applying for EDA assistance again in the foreseeable future if these maintenance violations continue unattended.

While it is not possible at present to determine the number of municipal gas systems which are a serious threat to health and safety and which could qualify for EDA assistance, I would estimate that initially between five to ten communities will seek assistance.

I think you will agree with me that the solutions to many public problems today are beyond the scope of the authority of any one Department within the Executive Branch. Nevertheless, these multifaceted problems are often subjected to fractional solutions along Departmental lines. All too often those solutions are inefficient or ineffective. In the situation at hand, the Department of Transportation has the authority to require compliance with Federal gas pipeline safety standards, but occasionally the achievement of safe gas distribution requires something more than just ordering compliance. The Department of Commerce has a mechanism which could assist greatly in improving community safety. It is to this end that the foregoing proposal for interdepartmental cooperation between Transportation and Commerce is made.

Sincerely,

BROCK ADAMS.

FEBRUARY 15, 1973.

Hon. PATRICIA ROBERTA HARRIS,
Secretary of the Department of Housing and Urban Development,
Washington, D.C.

DEAR MADAM SECRETARY: I would like to ask your assistance in dealing with a problem of immediate concern to the Department of Transportation, but which in the broader sense concerns both of our Departments.

The Natural Gas Pipeline Safety Act of 1966, places in the Secretary of Transportation responsibility for fostering public safety in the transportation by pipeline of natural gas. To carry out this responsibility, our Office of Pipeline Safety Operations has established Federal gas pipeline safety standards and carries out an active enforcement program to monitor compliance with those standards.

There are a number of small urban communities which own and operate natural gas distribution systems. Our inspections of these systems revealed that many of them are in a very hazardous conditions due to pipeline deterioration. When our field representative discovers a municipal gas system which does not comply with Federal gas pipeline safety regulations, the town's executive officer is given notice of the situation and advised of the town's liability for a civil penalty.

In many cases, the responsible local officials have stated that their towns are not financially able to pay a civil penalty, and even more disturbing, these officials assert that their towns do not have the economic base from which to raise revenues sufficient to repair or replace deteriorated gas pipelines.

Generally speaking, these municipally-owned gas systems are located in areas which have not shared fully in our national prosperity, i.e., small urban communities and areas of low family income in the south and southwest.

Your Department, through the Community Development Block Grant Program makes discretionary grants under Title I of the Housing and Community Development Act of 1974. In order to support community development activities directed toward the elimination of conditions which are detrimental to health, safety and public welfare, and to improve the quantity and quality of community services for persons of low and moderate income for the development of viable urban communities.

As we understand it, urban communities with deteriorated gas distribution systems which have made application for HUD discretionary grants in the past in order to repair or replace their pipelines have generally been unsuccessful. This seems to be due principally to one category in HUD's selection criteria in which serious and imminent threats are defined. The definitions were apparently drafted with water contamination problems in mind. When applied to gas distribution pipeline situations, the gas pipeline applicants have received few, if any, credits in this category and, thus, have been unsuccessful overall in their applications.

We do not think that any change to the basic HUD definitions is either necessary or desirable. We do, however, suggest that in applying these definitions, HUD could well consider factors which more closely recognize the nature and function of a community operated gas pipeline distribution system when an application concerns such system. In this way, municipal gas applicants would be on an equal footing with other discretionary grant applicants. Specific suggested factors for applying the HUD definitions are set forth in the enclosures to this letter.

While it is not possible to determine presently the number of municipal gas systems which could qualify for HUD grants, I would estimate that the initial requests for assistance would be from five to ten communities.

I think you will agree with me that the solutions to many public problems today are beyond the scope of the authority of any one Department within the Executive Branch. Nevertheless, these multifaceted problems are often subjected to fractional solutions along Departmental lines. All too often these solutions are inefficient or ineffective. In the situation at hand, the Department of Transportation has the authority to require compliance with Federal gas pipeline safety standards, but occasionally the achievement of safe gas distribution requires something more than just ordering compliance. The Department of Housing and Urban Development has a mechanism which could assist greatly in the attainment of better community safety. It is to this end that the foregoing proposal is made.

Sincerely,

BROCK ADAMS.

Enclosures.

FACTORS TO BE USED IN DETERMINING WHETHER A MUNICIPAL GAS PIPELINE DISTRIBUTION SYSTEM POSES A SERIOUS THREAT AS PROPOSED BY THE DEPARTMENT OF TRANSPORTATION

Background

Part 570 of Title 24, Code of Federal Regulations, prescribes the application procedures and the criteria for Department of Housing and Urban Development (HUD) discretionary grants under the Community Development Block Grant program. Preapplications which meet the threshold requirements are rated competitively based on specific criteria. One of these rating criteria concern the extent to which the program is necessary to alleviate a "serious threat to health or safety." Section 570.402(c) (2) (v) of the HUD regulations defines "serious threat" as a "condition that imperils public health or safety and requires *prompt* resolution." (Emphasis supplied.)

Proposed action

The Department of Transportation (DOT) does not desire any change to the above HUD definition, however, DOT suggests the introduction of some evaluation factors for consideration in determining when *prompt resolution* is required for a particular municipally-owned gas distribution system.

These suggested factors can be applied in a two-step process.

Step 1

The applying municipal gas distribution system would have to be inspected by the DOT's Office of Pipeline Safety Operations (OPSO) or the appropriate State agency operating under OPSO certification and at a minimum both of the following noncompliance situations would have to be found to exist.

1. There is inadequate or no external corrosion control for buried or submerged pipelines. (49 CFR 192.455 or 192.457.)
2. There are unrepaired or improperly repaired unsafe segments of pipe. (49 CFR 192.703(b) or 192.703(c).)

Step 2

If the threshold conditions described in Step 1 are found to exist, the concerned municipal gas distribution system would be considered to be in need of "prompt" corrective action if HUD considers all of the following conditions to be *abnormal*.

1. Incidence of leaks due to corrosion.

(For the purposes of this criteria leaks/mile would be the measuring unit. Leaks/mile would be computed from all leaks on mains and service lines together. A leak rate of more than one leak/mile would be considered abnormal.)

2. Unaccounted for gas.

(For HUD grant purposes, 5 percent loss or less of metered gas would be considered within the normal range.)

NOTE.—The normal ranges for the above factors can be furnished to HUD by OPSO. These ranges would be computed and updated by OPSO from the gas pipeline operator annual report submissions.

FACTORS TO BE USED IN DETERMINING WHETHER A MUNICIPAL GAS PIPELINE DISTRIBUTION SYSTEM POSES AN IMMINENT THREAT AS PROPOSED BY THE DEPARTMENT OF TRANSPORTATION

Background

Notwithstanding the competitive rating criteria for Department of Housing and Urban Development (HUD) discretionary grants under the Community Development Block Grant program, Section 570.402(c) (4) of Title 24, Code of Federal Regulations, provides that the Secretary of HUD may waive the preapplication requirements for discretionary grant if the request for assistance is in order to "alleviate an imminent threat to public health or safety that requires immediate resolution."

Proposed action

The Department of Transportation suggests that "imminent threat to health or safety" should be defined for gas pipeline purposes as a "condition that imperils public health or safety that requires *urgent* corrective action." The factors

that should be considered as controlling in determining when urgent corrective action is required for a particular municipally-owned gas distribution system can be applied in a two-step process.

Step 1

The applying municipal gas distribution system would have to be inspected by the DOT's Office of Pipeline Safety Operations (OPSO) or the appropriate State agency operating under an OPSO certification, and at a minimum all three of the following noncompliance situations would have to be found to exist.

1. There is inadequate or no external corrosion control for buried or submerged pipelines. (49 CFR 192.455 or 192.457.)
2. There is improper odorization of gas. (49 CFR 192.625(a).)
3. There are unrepaired or improperly repaired unsafe segments of pipe. (49 CFR 192.703(b) or 192.703(c).)

Step 2

If the threshold conditions described in Step 1 are found to exist, the concerned municipal gas distribution system would be considered to require "urgent corrective action" if all of the following factors are considered by HUD to be *significantly abnormal*.

1. Incidence of leaks due to corrosion.

(For the purposes of this criteria leaks/mile will be the measuring unit. Leaks/mile would be computed as a function of all leaks on mains and service lines. One leak/mile/year or less would be considered normal. Four leaks/mile/year or more would be considered significantly abnormal.)

2. Unaccounted for gas.

(For HUD grant purposes, 5% or less of metered gas loss would be considered within the normal range. Unaccounted for gas of 20% or more would be considered significantly abnormal.)

Question 11. Outside force damage continues to be the major cause of serious pipeline leaks.

Question 11(a). What is OPSO doing to address this problem?

Answer. OPSO has acted in several ways to solve the problem of outside force damage. We still believe that actions to reduce pipeline excavation damage incidents can be carried out most effectively at the State and local level because excavation work or underground construction performed by parties other than the pipeline operator can best be regulated at the local level. Since 1972, we have encouraged States to take action with appropriate State statutes. Last June, the Secretary sent to each of the State Governors and the Mayor of the District of Columbia a "Model Underground Utility Damage Prevention Act" which had been drafted by the Department, and he encouraged their initiative toward enactment of comparable State statutes. A number of Governors responded with suggestions and reports of their own State activities concerning this problem. Several States have very active programs for encouraging One-Call Systems such as those fostered by the American Public Works Association's Utility Location and Coordination Councils (ULCC). We join NTSB in encouraging and supporting the ULCC activities.

To obtain current factual information about the effectiveness of pipeline damage prevention programs, we contracted a study to the IIT Research Institute (IITRI) of Chicago, Illinois, in September 1976. Also, MTB has amended the Federal gas pipeline safety regulations to provide more effective marking of gas pipelines in order to alert excavators to their presence and reduce dig-in damage incidents. At the same time, we are joining in NTSB, industry, and contractors efforts toward solving this damage problem, and continue to analyze data from OPSO pipeline failure reports to direct our efforts for development of more effective programs for preventing outside force damage.

Question 11(b). Should additional resources be allocated to addressing this problem?

Answer. At this time, we do not believe that additional resources need to be allocated to address this problem. Activities will continue at the current level, particularly stressing the role of the States and local jurisdictions in establishing legislation and fostering programs to prevent underground utility and pipeline damage.

Question 11(c). What were the results of the recent contract study on this subject and what actions does OPSO expect to take as the result of the study?

Answer. The contract study conducted by IITRI has just been completed this

month, and the results will be made available to State agencies, operators, and others who are involved in the national damage prevention effort. IITRI reached 11 conclusions from the study and submitted eight recommendations to make pipeline damage prevention programs more effective. OPSO is presently reviewing the complete report and the conclusions and recommendations and will decide on the most appropriate actions to improve effectiveness of damage prevention programs in the future.

Question 12. Are there certain areas of pipeline safety not receiving adequate attention because of inadequate resources?

Answer. Because of the need to resolve welding problems on the trans-Alaska crude oil pipeline, in 1976 and 1977 much of the Department's pipeline safety resources were redirected from other areas of pipeline safety to those of that pipeline. The program areas adversely affected by this increased workload were compliance and enforcement, State surveillance and assistance, and regulations development. Our present and future involvement with this pipeline requires continuing commitment of pipeline safety resources. Without the increased staffing and funding requested for fiscal year 1979, our existing resources will be stretched even thinner in attempts to carry out the Department's responsibilities for both the liquid and gas pipeline.

Question 13. Is there any monitoring of activities such as pipeline construction or pipeline/pipeline component manufacturing?

Answer. A very limited amount of pipeline construction is inspected. OPSO jurisdiction does not extend to pipeline component manufacturers and consequently these manufacturers are not inspected.

Question 13(a). Have there been any problems identified with construction or material defects?

Answer. Inspections of construction sites and the analysis of material defects reported in leak reports submitted to OPSO have not identified any significant problem areas in either of these categories.

Question 13(b). If so, would it be feasible and useful to selectively monitor these activities (for example, those operators with high incidence of construction-related problems or those manufacturers whose products appear to have a high rate of failure or involving pipelines to be built in densely populated areas or carrying more highly volatile substances)?

Answer. If problems arise relating to construction or material defect, it would be useful and feasible to increase the level of monitoring construction activity.

Question 14. In the past, pipeline maintenance has been principally based on corrective (after a leak is discovered) basis. What efforts are being undertaken to develop or implement procedures to identify potential problems before they occur?

Answer. Both the gas and liquid pipeline safety regulations contain requirements established to prevent leakage and identify potential problems. The most serious problems identified to date are third party damage and corrosion. Gas and liquid pipelines are required to be marked to help reduce third party damage, the principal cause of both gas and liquid pipeline accidents. Both gas and liquid pipelines are required to be inspected to determine if the corrosion protection system is adequate to prevent hazardous leaks from developing and to take remedial action if the corrosion protection is inadequate. Both gas and liquid pipelines are required to be inspected to determine areas of active corrosion and take remedial action, including installing cathodic protection and/or replacement of the corroded pipe before leakage occurs. New pipelines are required to be coated and placed under cathodic protection to prevent leakage from corrosion. Periodic inspection of valves, pressure limiting and relief devices, and pressure regulating stations on gas lines are required to ensure the equipment is working properly to prevent the overpressure or shutdown of a gas system. Both gas and liquid pipeline rights-of-way are required to be patrolled regularly to observe any unusual condition which might endanger the integrity of the pipeline. OPSO is also encouraging the development of equipment to more effectively evaluate the condition of existing systems.

Question 15. Are there any gaps in the present pipeline safety statutes?

Answer. Present legislation governs the safe transportation of hazardous materials by pipeline facilities in the United States, Puerto Rico, the Virgin Islands, American Samoa, and Guam, and on the Outer Continental Shelf to the extent the facilities are part of a Deepwater Port or are used to transport OCS resources.

The present legislation may not be broad enough, however, to cover pipeline facilities which may be built on the OCS in the future to receive and transport imported energy supplies such as LNG. We do not view this gap as a serious one at present since there are not any firm proposals to begin construction of these facilities. Moreover, before such facilities are built we expect that Congress would enact controlling legislation such as the Deepwater Port Act of 1974 (33 USC 1501).

Question 15(a). Is new or additional legislation required?

Answer. We do not envision seeking any additional legislation in the field this year.



The present field station may not be a good one, however, it is the only one which may be built on the OCS in the future. It is very important to have a station which is not only a good one but also a good one for the future. We do not know this yet but we are sure that it will be a good one for the future. We do not know this yet but we are sure that it will be a good one for the future. We do not know this yet but we are sure that it will be a good one for the future.

There is no other station in the area. We do not know this yet but we are sure that it will be a good one for the future. We do not know this yet but we are sure that it will be a good one for the future. We do not know this yet but we are sure that it will be a good one for the future.

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