NATURAL GAS PIPELINE SAFETY ACT AMENDMENTS OF 1975

HEARINGS

BEFORE THE

SUBCOMMITTEE ON SURFACE TRANSPORTATION

OF THE

COMMITTEE ON COMMERCE

UNITED STATES SENATE

NINETY-FOURTH CONGRESS

FIRST SESSION

ON

S. 2042

TO AMEND AND STRENGTHEN THE NATURAL GAS PIPELINE SAFETY ACT OF 1968, AND TO AUTHORIZE ADDITIONAL APPROPRIATIONS THEREFOR

S. 2183

TO AMEND THE NATURAL GAS PIPELINE SAFETY ACT OF 1968 AS AMENDED, TO AUTHORIZE ADDITIONAL APPROPRIATIONS, AND FOR OTHER PURPOSES

SEPTEMBER 25 AND 26, 1975

Serial No. 94–49

Printed for the use of the Committee on Commerce

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1975

65-072

COMMITTEE ON COMMERCE

WARREN G. MAGNUSON, Washington, *Chairman*

JOHN O. PASTORE, Rhode Island
VANCE HARTKE, Indiana
PHILIP A. HART, Michigan
HOWARD W. CANNON, Nevada
RUSSELL B. LONG, Louisiana
FRANK E. MOSS, Utah
ERNEST F. HOLLINGS, South Carolina
DANIEL K. INOUYE, Hawaii
JOHN V. TUNNEY, California
ADLAI E. STEVENSON, Illinois
WENDELL H. FORD, Kentucky
JOHN A. DURKIN, New Hampshire

JAMES B. PEARSON, Kansas
ROBERT P. GRIFFIN, Michigan
HOWARD H. BAKER, JR., Tennessee
TED STEVENS, Alaska
J. GLENN BEALL, JR., Maryland
LOWELL P. WEICKER, JR., Connecticut
JAMES L. BUCKLEY, New York

MICHAEL PERTSCHUCK, *Chief Counsel*
S. LYNN SUTCLIFFE, *General Counsel*
EDWARD B. COHEN, *Staff Counsel*
MALCOLM M. B. STERRETT, *Minority Counsel*

SUBCOMMITTEE ON SURFACE TRANSPORTATION

VANCE HARTKE, Indiana, *Chairman*

HOWARD W. CANNON, Nevada
ERNEST F. HOLLINGS, South Carolina
RUSSELL B. LONG, Louisiana
ADLAI E. STEVENSON III, Illinois
WENDELL H. FORD, Kentucky
JOHN A. DURKIN, New Hampshire

LOWELL P. WEICKER, JR., Connecticut
HOWARD H. BAKER, JR., Tennessee
J. GLENN BEALL, JR., Maryland
JAMES L. BUCKLEY, New York

CONTENTS

CHRONOLOGICAL LIST OF WITNESSES

SEPTEMBER 25, 1975

SEPTEMBER 26, 1975

ADDITIONAL ARTICLES, LETTERS, AND STATEMENTS

NATURAL GAS PIPELINE SAFETY ACT AMENDMENTS OF 1975

THURSDAY, SEPTEMBER 25, 1975

U.S. SENATE,
SUBCOMMITTEE ON SURFACE TRANSPORTATION,
COMMITTEE ON COMMERCE,
Washington, D.C.

The subcommittee met at 10:06 a.m. in room 5110, Dirksen Senate Office Building, Hon. Vance Hartke (chairman of the subcommittee) presiding.

OPENING STATEMENT BY SENATOR HARTKE

Senator HARTKE. Good morning.

This morning the Surface Transportation Subcommittee begins 2 days of oversight hearings into the implementation of the Natural Gas Pipeline Safey Act of 1968. In addition, the subcommittee will receive testimony on S. 2183, amendments requested by the administration, and S. 2042, legislation being sponsored by my distinguished colleague, Senator Beall.

With the Nation's ever-growing rate of consumption of energy, we place a greater demand on pipelines as a transportation system. In addition, we are relying more and more on pipelines to transport particularly volatile products such as liquefied natural gas and liquid ammonia. It is thus incumbent upon the Federal Government to insure that the safety programs of the gas pipeline industry are comprehensive and effective.

Since the enactment of the Natural Gas Pipeline Safety Act in 1968, it has been our intent that the Department of Transportation (DOT) assert responsible national leadership, coupled with State participation, in developing and enforcing stringent pipeline safety standards. Unlike other modes of transportation, pipelines offer a unique risk to the public health and safety: buried deep below the ground and running adjacent to our schools and shopping centers, the repercussions of a pipeline accident could be catastrophic.

There are several important issues that we plan to explore this morning. When the initial safety program was begun in 1968, the DOT adopted existing industry regulations as mandatory Federal regulations. We would like to find out to what extent the Office of Pipeline Safety has kept pace with industry's refinements of these original standards? Are there areas where the industry standards are inadequate and the Federal Government should be developing its own more stringent regulations?

Staff member assigned to these hearings: Edward B. Cohen.

The Natural Gas Pipeline Safety Act envisions a Federal-State relationship in the enforcement of the Federal pipeline safety standards. How has this partnership been working? Have the States developed the necessary resources to assure compliance with the regulations? Has the Federal Government provided sufficient funds to the States to enable adequate enforcement activity? Are regulations being enforced for both interstate and intrastate pipelines?

The DOT has recently reorganized the pipeline safety effort by establishing a new Bureau of Materials Transportation. Is this new bureau being structured so as to provide adequate resources and personnel to the pipeline safety effort? Are there areas, such as on the Outer Continental Shelf or other Federal lands, where jurisdictional squabbles between agencies are preventing adequate Federal regulation?

There are other areas that we will explore this morning. How have the resources available to the Department in fulfilling its responsibilities under the Natural Gas Pipeline Safety Act been allocated and utilized? We want to find out what role the Technical Pipeline Safety Advisory Committee has played in assisting the Office of Pipeline Safety? In what ways can Congress support a vigorous pipeline safety program?

[The bills and agency comments follow:]

94TH CONGRESS
1ST SESSION

S. 2042

IN THE SENATE OF THE UNITED STATES

JUNE 27 (legislative day, JUNE 6), 1975

Mr. BEALL introduced the following bill; which was read twice and referred to the Committee on Commerce

A BILL

To amend and strengthen the Natural Gas Pipeline Safety Act of 1968, and to authorize additional appropriations therefor.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Natural Gas Pipeline Safety Act Amendments of 1975".

SEC. 2. Section 3 (b) of the Natural Gas Pipeline Safety Act of 1968, as amended (49 U.S.C. 1672 (b)), is amended—

(1) by adding immediately after the word "design" in the second sentence, the following: "(with special consideration in locations where subsequent excavation activity is likely to occur)";

(2) by adding before the word "testing" in the second sentence, the following: "emergency plans and procedures," and

(3) by adding following the word "data" in clause (1) a comma and the following: "including the reports and recommendations of the National Transportation Safety Board".

SEC. 3. Section 4 of the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. 1673) is amended by designating subsection (c) as subsection (e) and by striking out subsection (b) and inserting in lieu thereof the following:

"(b) The Secretary shall submit to the Committee all proposed standards and amendments to such standards and afford such Committee a reasonable opportunity, not to exceed ninety days, unless extended by the Secretary, to prepare a report on the technical feasibility, reasonableness, and practicability of each such proposal. Each report by the Committee, including any minority views, shall be published by the Secretary and form a part of the proceedings for the promulgation of standards. In the event that the Secretary rejects the conclusions of the majority of the Committee, he shall not be bound by such conclusions but shall publish his reasons for rejection thereof.

"(c) The Committee shall meet at least twice annually.

During one such meeting, the Committee shall consider the reports and recommendations of the National Transportation Safety Board relating to gas pipeline safety and the response of the Secretary thereto. A week prior to the meeting at which the National Transportation Safety Board reports will be considered, the Secretary shall provide the members of the Committee with a summary of the National Transportation Safety Board's recommendations, particularly those directed to the Federal Government, and a statement of action, if any, taken by the Secretary.

"(d) The Committee may propose safety standards for pipeline facilities and the transportaton of gas to the Secretary for his consideration. All proceedings of the Committee shall be recorded and the record of each such proceeding shall be available for public inspection.".

SEC. 4. (a) Section 5(a) of the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. 1674(a)) is amended by (1) redesignating clause (4) as clause (5) and (2) inserting before "and" preceding such clause the following: "(4) has established a statewide utility coordinating council to encourage and promote—

"(A) the establishment of local utility coordinating councils in appropriate areas of the State where excavation damages represent a significant problem, and

"(B) damage prevention programs voluntarily es-

tablished by the private sector or, if necessary, by State or local legislation, under which excavators will notify (preferably by a one-call system) all underground operators prior to their commencing of excavation and all underground operators will follow-up by marking their underground lines and assisting the excavator in avoiding damage to such lines;".

(b) Section 5(c) of such Act is amended by inserting after the word "available" in the first sentence the following: "100 per centum (but not to exceed $85,000 for each State) of the cost of a full-time safety engineer, and not less than one or more than three full-time inspectors, as determined by regulations issued by the Secretary taking into account the needs of the respective States and the miles of pipelines within such States and,".

SEC. 5. Section 8(a)(2) of the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. 1677(a)(2)) is amended by striking "inspection and maintenance".

(b) Section 11 of such Act is amended to read as follows:

"REQUIRED PLANS

"SEC. 11. (a) Each person who engages in the transportation of gas or who owns or operates pipeline facilities not subject to the jurisdiction of the Federal Power Commission under the Natural Gas Act shall (1) file with the Sec-

retary or, where a certification or an agreement pursuant to section 5 of this Act is in effect, with the State agency, a plan or plans, and any changes in such plans, in accordance with regulations prescribed by the Secretary or appropriate State agency, for—

"(A) inspection and maintenance of each such pipeline facility owned or operated by such person;

"(B) emergencies and procedures in response thereto; and

"(C) the education of its customers on the importance of reporting gas odors and leaks and the possible hazards and dangers of not reporting them; and

(2) maintain a log which shows the receipt and handling of each leak and emergency report.

"(b) The Secretary may, by regulation, also require persons who engage in the transportation of gas or who own or operate pipeline facilities subject to the provisions of this Act to file such plan or plans for approval. If at any time the agency with responsibility for enforcement of compliance with the standards established under this Act finds that such plan is inadequate to achieve safe operations, such agency shall, after notice and opportunity for a hearing, require such plan to be revised. The plan required by the agency shall be practicable and designed to meet the need for pipeline safety.

In determining the adequacy of any such plan, such agency shall consider—

"(1) relevant available pipeline safety data, including the reports and recommendations of the National Transportation Safety Board;

"(2) whether the plan is appropriate for the particular type of pipeline transportation;

"(3) the reasonableness of the plan; and

"(4) the extent to which such plan will contribute to public safety."

SEC. 6. Section 12(b) of the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. 1681(b)) is amended to read as follows:

"(b) (1) The Secretary is authorized to monitor and evaluate the performance of the respective States and their enforcement practices and carry out such other inspections and investigations as may be necessary to aid in the enforcement of the provisions of this Act and the standards established pursuant to this Act. Each year the Secretary shall evaluate at least two States, one urban and one rural, in depth and, after providing the States selected with an opportunity to comment on the findings and recommendations of such evaluations, issue a report, either separately or as a part of the annual report pursuant to section 14 of this Act, to the President for transmittal to the Congress.

"(2) For purposes of enforcement of this Act, officers, employees, or agents authorized by the Secretary, upon presenting appropriate credentials to the individual in charge, are authorized (A) to enter upon, at reasonable times, pipeline facilities, and (B) to inspect, at reasonable times and within reasonable limits and in a reasonable manner, such facilities. Each such inspection shall be commenced and completed with reasonable promptness.".

SEC. 7. Section 13 of the National Gas Pipeline Safety Act of 1968 (49 U.S.C. 1682) is amended by (1) redesignating subsections (b), (c), and (d) as subsections (c), (d), and (e), respectively, and by (2) adding new subsections (a) and (b) as follows:

"(a) The Secretary shall conduct, through grants or contracts, or both, with individuals, States, and nonprofit institutions, research, testing, and development in—

"(1) methods to detect leaks and the methods of repair of such leaks;

"(2) the development of monitoring devices, both automatic and manual;

(3) improved procedures for accident control;

(4) component reliability of gas pipelines and facilities and the development of safe service life prediction for the various components;

"(5) gas odorization and migration into buildings;

"(6) the development of safety or quality assurance programs or systems;

"(7) the development of tools and procedures for inplace evaluation;

"(8) excavation damage accidents and their prevention;

"(9) offshore and Arctic pipeline safety problems; and

"(10) other appropriate areas which will promote the purposes of this Act.

"(b) The Secretary is authorized to conduct programs or to make grants or enter into contracts, or both, with States and public and private nonprofit institutions of higher education and to contract with private for profit entities to (1) provide for specialized training of personnel employed in the pipeline safety field, except that employees of any person shall not be eligible for such training unless such person pays the full cost thereof and (2) develop minimum qualifications for inspectors and other important field personnel.".

SEC. 8. Section 14 of the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. 1683) is amended by (1) striking "accidents" in subsection (a) (1) and inserting in lieu thereof "leaks, accidents" and (2) by redesignating clauses

(2) through (10) as clauses (3) through (11), respectively, and inserting the new clause (2) as follows:

"(2) a complete list of the recommendations of the National Transportation Safety Board relating to pipeline safety, with an indication of the action taken in response thereto by the Secretary;".

SEC. 9. Section 15 of the Natural Gas Pipeline Safety Act of 1968 is amended to read as follows:

"APPROPRIATIONS AUTHORIZED

"SEC. 15. (a) There are authorized to be appropriated such sums as are necessary not to exceed $3,500,000 for the fiscal year ending June 30, 1976; not to exceed $875,000 for the period beginning July 1, 1976, and ending September 30, 1976; not to exceed $4,500,000 for the fiscal year ending September 30, 1977; and not to exceed $5,500,000 for the fiscal year ending September 30, 1978, except the funds appropriated pursuant to this section shall not be used for Federal grants-in-aid.

"(b) For the purpose of carrying out the provisions of subsection 5(c) of this Act, there is authorized to be appropriated for Federal grants-in-aid, such sums as necessary not to exceed $4,500,000 for the fiscal year ending June 30, 1976; not to exceed $1,250,000 for the period beginning July 1, 1976, and ending September 30, 1976; not to ex-

ceed $5,000,000 for the fiscal year ending June 30, 1977; and not to exceed $5,500,000 for the fiscal year ending June 30, 1978.".

94TH CONGRESS
1ST SESSION

S. 2183

IN THE SENATE OF THE UNITED STATES

JULY 25 (legislative day, JULY 21), 1975

Mr. MAGNUSON (for himself and Mr. PEARSON) (by request) introduced the following bill; which was read twice and referred to the Committee on Commerce

A BILL

To amend the Natural Gas Pipeline Safety Act of 1968 as amended, to authorize additional appropriations, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Natural Gas Pipeline Safety Act Amendments of 1975".

SEC. 2. Section 2 of the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. 1671) is amended—

(1) by striking "; and" at the end of the paragraph designated (8) and adding the following: ", except that it shall not include any facility which transports gas from

an interstate gas pipeline to a direct sales customer purchasing gas for its own consumption;"

(2) by redesignating paragraph (9) as (10), and inserting a new paragraph (9) as follows:

"(9) 'Intrastate pipeline transportation' means pipeline facilities and transportation of gas within a State which are not subject to the jurisdiction of the Federal Power Commission under the Natural Gas Act, except that it shall include pipeline facilities which transport gas from an interstate pipeline to a direct sales customer purchasing gas for its own consumption; and".

SEC. 3. (a) Section 3(a) is amended by deleting the word "minimum" from the first and last sentences.

(b) Section 3(b) is amended by deleting the word "minimum" from the first sentence, and by amending the last sentence to read as follows: "Any State agency may adopt additional or more stringent standards for intrastate pipeline transportation which are compatible with the Federal standards, but may not adopt or continue in force after the Federal standards become effective any standards applicable to interstate transmission facilities.".

SEC. 4. Section 5(a) is amended as follows:

(1) by deleting from the first sentence thereof the words "pipeline facilities and the transportation of gas (not subject to the jurisdiction of the Federal Power

65-072—76——2

Commission under the Natural Gas Act) within a State" and substituting in lieu thereof the words "intrastate pipeline transportation";

(2) by deleting from clause (1) the words "pipeline facilities and" and "of gas"; and

(3) by amending clause (2) to read: "has adopted each Federal safety standard established under this Act as of the date of the certification which is applicable to such transportation or, with respect to each such Federal safety standard established within 120 days before the date of the certification, is taking steps pursuant to State law to adopt such standard;".

SEC. 5. (a) So much of section 5(b) as begins with "With respect to" and ends with "actions to—" is amended to read: "With respect to any intrastate pipeline transportation for which the Secretary does not receive a certification under subsection (a) of this section, the Secretary is authorized by agreement with a State agency (including a municipality) to authorize such agency to assume responsibility for, and carry out on behalf of the Secretary as it relates to intrastate pipeline transportation the necessary actions to—".

(b) The first sentence of section 5(d) is amended to read: "A certification which is in effect under subsection (a) of this section shall not apply with respect to any new or amended Federal safety standards established for intrastate

pipeline transportation pursuant to this Act after the date of such certification.".

SEC. 6. Section 7 is amended by adding the following sentence at the end thereof: "The Commission may not attach to the issuance of a certificate of public convenience and necessity or to the exercise of rights granted thereunder a condition that the applicant comply with safety standards for pipeline facilities or the transportation of gas other than those prescribed by the Secretary.".

SEC. 7. The first sentence of section 14(a) is amended by striking "March 17" and inserting in lieu thereof "June 15".

SEC. 8. (a) Section 15(a) is amended by striking "and" therefrom and by inserting immediately following "June 30, 1976" the phrase "$500,000 for the period July 1, 1976, through September 30, 1976, and $3,500,000 for the fiscal year ending September 30, 1977,".

(b) Section 15(b) is amended by striking "and" therefrom and by inserting immediately following "June 30, 1976" the phrase ", and $2,500,000 for the fiscal year ending September 30, 1977".

OFFICE OF THE SECRETARY OF TRANSPORTATION,
Washington, D.C., September 23, 1975.

Hon. WARREN G. MAGNUSON,
Chairman, Committee on Commerce, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: Your Committee has asked for the views of this Department concerning S. 2042, a bill "To amend and strengthen the Natural Gas Pipeline Safety Act of 1968, and to authorize additional appropriations therefor."

The Department's position on each substantive section of the bill is set forth below.

Section 2.—The Department believes the proposed amendments to subsection 3(b) of the Natural Gas Pipeline Safety Act of 1968 (the Act) (49 U.S.C. 1671 *et seq.*) are unnecessary.

Section 2(1).—Existing Federal gas pipeline safety standards require that pipe be designed with sufficient wall thickness or that it be installed with adequate protection to withstand anticipated external pressures and loads likely to be imposed on the pipe after installation. Specific design requirements have not been prescribed for pipe located in areas where subsequent excavation may occur because it is not economically practicable to require all of the pipe located in such areas to be, in effect, overdesigned in order to withstand the relatively infrequent possibility of disturbance by excavation equipment. Moreover, when pipelines, expected to have an operating life of several decades, are installed, it is often difficult to predict their possible exposure to subsequent excavation activity.

Rather than imposing expensive design requirements, the Office of Pipeline Safety Operations (OPSO), within the Department, is attacking the problem of excavation damage on other fronts. OPSO recently issued a comprehensive regulation on the marking of pipelines to identify them and thereby reduce the possibility of excavation damage. That regulation also includes incentive for operators to promote passage of laws and adoption of programs by local government bodies to prevent interference with underground pipelines. The problem of excavating and other third party damage and the effectiveness of the various programs for reducing such damage are currently being studied by an OPSO contractor. Finally, OPSO is now reviewing the results of a recently completed contract on the gas pipeline industry's capability for rapid shutdown of pipelines which have failed.

Section 2(2).—Under section 3(b) of the Act, as it now exists, the Department, through OPSO, already requires each gas pipeline operator to have written emergency procedures (49 CFR 192.615). In addition, a currently outstanding notice of proposed rule making would expand the present requirements for emergency plans and procedures (40 FR 13317, March 26, 1975).

Section 2(3).—In exercising its authority under section 3(b) of the Act, OPSO regularly considers the reports and recommendations of the National Transportation Safety Board (NTSB) in promulgating pipeline safety standards. A number of the provisions of the existing safety standards (49 CFR Part 192) and many of the proposed amendments thereto are based on NTSB safety recommendations. Additionally, the Secretary of Transportation is required by section 307 of the Independent Safety Board Act of 1974 (ISB Act) (49 U.S.C. 1901 *et seq.*) to respond formally to NTSB on each NTSB recommendation to the Secretary.

Section 3.—The Department does not support the proposed amendments to section 4 of the Act to require the Technical Pipeline Safety Standards Committee to meet at least twice annually and at one of those meetings to consider NTSB recommendations relating to pipeline safety and the Secretary's response thereto. At present, the Committee advises the Secretary on the technical feasibility, reasonableness, and practicability of standards and amendments proposed for adoption. The process of standards development would not easily match a fixed schedule for review by the Committee. The existing law is preferable in that it allows the Secretary flexibility to schedule Committee meetings when there is sufficient material for the Committee to consider.

Further, the Committee now considers NTSB recommendations and OPSO responses when in the form of a proposed rule. We fail to see the benefit of the Committee's reviewing NTSB recommendations that the Department has refused to adopt and stated its reasons therefor under the 90-day time frame of section 307 of the ISB Act.

Section 4.—The Department opposes amendment of section 5(a) of the Act to require the Secretary to condition certification of State agencies on the establishment of a State-wide utility coordinating council which *encourages* and *promotes* (1) the establishment of local utility councils, and (2) damage prevention programs relating to excavation projects. The Department is already encouraging the adoption of State legislation to prevent damage to buried pipelines and utility lines. In November 1974, the Secretary sent to the Governor of each State a model statute designed to protect underground pipelines and utilities from excavation damage, which he urged each Governor to consider and support for adoption at the State and local level.

Since the councils required by the proposed amendment would only encourage and promote the desired goals, the establishment of pipeline damage prevention programs would remain largely voluntary. The Department does not advocate a mandatory excavation damage protection program as a condition to certification because it believes many of the States could not readily meet such a requirement. The burden of determining whether a particular State meets the proposed, extremely subjective requirements for certification and for enforcing the safety of gas pipelines in those States unable to certify would fall on the Federal Government.

Additionally, the amendment would be technically inconsistent with the provision in section 5(a) permitting municipality certification. Municipalities which may otherwise qualify for certification would as a practical matter be unable to meet the proposed new requirement of establishing a State-wide utility coordinating council.

The Department does not support the amendment of section 5(c) of the Act to require the Secretary to pay up to 100 percent (but not to exceed $85,000 for each State) of the cost of a full-time engineer, and not less than one or more than three full-time inspectors, as determined by regulations issued by the Secretary. The pipeline safety needs of some States do not justify the employment of a full-time engineer who would devote all his time to the gas safety program. For example, in New Hampshire, which has relatively few gas customers, hiring a full-time engineer and inspector would be excessive.

Moreover, the existing law provides for Federal funding of the cost of State personnel and allows the Secretary flexibility in determining the basis for allocating those funds.

Additionally, the Department is concerned about the merits of funding more than 50 percent of the cost of State personnel, The purpose of the existing limit on funding is to expand and improve existing State programs rather than provide a new source of funds. Since the amendment does not require an applicant to maintain its present level of pipeline safety program expenditures in order to be eligible for the grant, a State agency may reduce its own spending by funding the total cost of professional personnel from the Federal grant. Consequently, the effect of 100 percent funding could be greater Federal spending without the desired improvement in the quality of State pipeline safety programs.

Section 5.—The Department considers unnecessary the amendment of sections 8 and 11 of the Act to require operators to file with OPSO or a certified State agency emergency plans and plans for the education of its customers on the importance of reporting gas odors.

The Federal gas pipeline safety standards currently require each operator to establish and carry out written emergency plans and plans for an educational program for customers (49 CFR 192.615). These plans are required to be kept available for OPSO inspection and copying which enables OPSO to determine whether the operator's plans are in compliance with the Act and the standards established thereunder.

The Department also opposes the amendment of section 11 of the Act to require an operator to maintain a log which shows the receipt and handling of each leak and emergency report.

Due to the variety of operating conditions throughout the nation, OPSO does not believe the proposed log requirement to be an adequate technique for addressing the problem of operator response to leaks and emergencies. Rather the problem should be dealt with in the manner now being undertaken by OPSO through improved requirements for emergency response procedures and by giving priority treatment to those topics in training programs and during monitoring visits.

Further, the Department believes it unnecessary to amend section 11 of the Act to specifically include the reports and recommendations of the NTSB among the items to be considered in determining the adequacy of inspection and maintenance plans.

Under the existing section 11, OPSO may, and in practice does, consider NTSB recommendations in determining the adequacy of inspection and maintenance plans.

Section 6.—The Department considers unnecessary the amendment of section 12(b) of the Act to require the Secretary to monitor and evaluate in depth the performance of at least two States, one urban and one rural, each year. Section 12 now provides adequate authority for monitoring and in-depth evaluations. OPSO, in fiscal year 1975, examined in depth two rural States, Alabama and Wyoming, and three urban States, California, Maryland, and New York, to determine the adequacy of program controls used to ensure compliance with pipeline safety standards and of financial management controls over pipeline safety activities.

Section 7.—The Department considers unnecessary and overly restrictive the amendment of section 13 of the Act to require the Secretary to conduct research, testing, and development in specifically defined areas. The Act no gives the Secretary ample authority to conduct such studies. All of the specific areas of study suggested are currently in the OPSO research and development program or are proposed for future action. Additionally, the amendment would not allow the Secretary to conduct any of the studies within the Department but only through grants or contracts with persons or institutions outside the Department. The amendment would also require the Secretary to continuously study by grant or contract the specific subjects even though further study may not be merited during a particular period.

The Department believes it unnecessary to amend section 13 of the Act to give the Secretary specific authority to provide for specialized training of pipeline safety personnel and to develop minimum qualifications for inspectors and other field personnel. The Secretary now has broader, general authority under section 13 to provide training. Under this authority over 200 State agency personnel and over 2,000 industry personnel have received training sponsored by the Department. The curriculum for these training activities concentrates on the qualifications of inspectors and other important field personnel.

Section 8.—The Department opposes amendment of section 14 of the Act to require the annual report to include a compilation of gas pipeline leaks in addition to accidents and casualties. OPSO has not observed any significant correlation between the number of gas leaks and the number of accidents and casualties.

Moreover, compiling leak totals in time to include data in the report required to be submitted by March 17 may not be possible. Annual leak reports for the preceding calendar year are required to be filed with OPSO by February 15 of each year. Unless section 14 is amended as suggested by section 7 of S. 2183 (the Department's proposed bill) by changing the due date of the annual report from March 17 to June 15, it would be logistically extremely difficult to compile a leak report in time to meet the March 17 date.

The Department opposes amendment of section 14 of the bill to require the annual report to contain a complete list of NTSB recommendations and the responses of the Secretary thereto. Section 305 of the ISB Act (49 U.S.C. 1904) already provides that the NTSB shall give the Congress each year:

"An appraisal in detail of the accident investigation and accident prevention activities of other government agencies charged by Federal or State law with responsibility in this field."

The Department believes that the proposed amendment of section 14 would result in a duplication of effort without achieving the goal of better informing Congress concerning pipeline safety problems.

Section 9.—The Department believes that the appropriations proposed authorization by section 8 of S. 2183 are adequate for an effective Federal gas pipeline safety program.

The Office of Management and Budget advises that from the standpoint of the Administration's program there is no objection to the submission of this report to the Congress.

Sincerely,

JOHN HART ELY.

NATIONAL TRANSPORTATION SAFETY BOARD,
Washington, D.C., September 12, 1975.

Hon. WARREN G. MAGNUSON,
Chairman, Committee on Commerce,
U.S. Senate,
Washington, D.C.

DEAR MR. CHAIRMAN: This is in reply to your letter of July 15, 1975, requesting the National Transportation Safety Board's comments on S. 2042, a bill "To amend and strengthen the Natural Gas Pipeline Safety Act of 1968, and to authorize additional appropriations therefor."

The broad purpose of S. 2042 is to strengthen the Natural Gas Pipeline Safety Act (Act) by eight substantive amendments designed to enhance pipeline safety. Our comments with respect to these amendments, reflected in the numbered paragraphs below, are as follows:

1. The amendment of section 3(b)—(49 U.S.C. 1672) of the Act would amplify the authority of the Secretary of Transportation to set pipeline transportation safety standards for pipeline design in locations where subsequent excavation is likely to occur, and for emergency plans and procedures.

The Board has found that excavation pipeline accidents are a major problem, and that emergency plans and procedures are inadequate to cope with the dangers inherent in those accidents. Therefore, standards are necessary, both from the design aspect of such pipelines to insure their protection from excavation damage, and to correct the known safety deficiencies, which we have observed in the emergency plans and procedures of pipeline companies.

2. The amendment of section 3(b)(1) of the Act would require the Secretary to consider "relevant available pipeline safety data . . . including the reports and recommendations of the National Transportation Safety Board."

The Board would welcome this amendment and believes that its reports and recommendations would add a beneficial dimension to the Secretary's initial development of pipeline safety standards, or amendments thereto.

3. The amendment of section 4 of the Act (49 U.S.C. 1673) would revise subsection (b) thereof to provide for at least two meetings annually of the Technical Pipeline Safety Standards Committee (TPSSC), and require that the reports and recommendations of this Board be reviewed during one such meeting.

We agree that at least two meetings a year are required for a proper functioning of TPSSC, since this committee generates recommendations for standards. It is also important that the committee should consider Board reports and recommendations before proposing standards to the Secretary.

4. The amendment of section 5 of the Act (49 U.S.C. 1674) would require the establishment of a statewide utility coordinating council to encourage and promote the formation of local councils in locations where excavation damage to pipelines represents a significant problem, and establish appropriate damage prevention programs through notification to pipeline companies by excavators and marking of underground lines.

The Board believes that such programs at the local level would unquestionably minimize excavation damage to underground pipelines.

A second amendment to section 5 would require the States to employ a full-time pipeline safety engineer and from one to three full-time pipeline inspectors.

The Board strongly supports this amendment, since without qualified State officials it would appear that the safety programs and the enforcement thereof could not be fully effectuated.

5. The amendment of sections 8 and 11 of the Act (49 U.S.C. 1677, 1680) would revise and expand the requirements upon certain pipeline transportation operators to file with the Secretary all plans relating to inspection, maintenance, emergency procedures, and customers' reports of gas odors and leaks. Operators must maintain a log showing receipt and processing of all reports of odors, leaks, and emergencies, and if so required, file such plans for approval.

The Board supports these requirements pertaining to pipeline transportation operators. The processing requirement for odor and leak reports should insure that the operators follow up such reports immediately by appropriate safety actions. The operators' safety response can then be ascertained through inspection of his records. Such a requirement should lead to increasingly effective corrective measures by the operator.

6. The amendment of section 12 of the Act (49 U.S.C. 1681) would require additional monitoring of the performance of at least two States annually by the Secretary, and an evaluation report by the Secretary with respect thereto.

The Board supports this amendment as a method of improving the States' enforcement of pipeline safety standards and programs.

7. The amendment of section 13 of the Act (49 U.S.C. 1682) would authorize various new Secretarial activities in research and development for pipeline safety problems, such as gas odorization and migration, excavation damage and prevention, offshore and Arctic pipeline safety, etc. A special program would also be authorized to provide training and develop minimum qualifications for inspectors and other field personnel engaged in pipeline operations.

The Board is convinced that each of the areas enumerated presently needs research and development. Such needs are fully supported by Safety Board reports and recommendations. With respect to operational safety training, the Board's reports indicate that such training is badly needed and essential to attaining any improved level of pipeline safety operations.

8. The amendment of section 14 of the Act (49 U.S.C. 1683) would require that the Secretary's annual report to Congress include a list of the Board's recommendations and the corrective actions taken by the Department of Transportation respecting such recommendations.

The Board supports this amendment as an effective means of assuring the responsiveness of the Department to the Board's pipeline safety recommendations.

Based on the foregoing analysis, the Safety Board recommends enactment of S. 2042.

Sincerely yours,

JOHN H. REED, *Chairman.*

Senator HARTKE. We will proceed to hear from these witnesses, but first, Senator Beall has some opening remarks.

OPENING STATEMENT BY SENATOR BEALL

Senator BEALL. Mr. Chairman, I congratulate you for scheduling these hearings on gas pipeline safety.

Since 1972, when a series of residential gas explosions rocked the Washington-Baltimore metropolitan area, pipeline safety has been a subject of utmost concern and urgency to me.

Alarmed over the explosions which occurred in Annandale, Va. and Columbia and Bowie, Md., as well as the rising pipeline fatalities nationwide, I authored an amendment to the DOT appropriations bill earmarking $275,000 for a research effort into the growing problem of natural gas explosions in residential areas. Pursuant to my amendment four contracts were let to examine a number of problem areas. They were: plastic pipes; odorization; in-place evaluation of pipeline sys-

tems; and the overall safety of gas distribution systems. One study has been completed, two more will be completed next month, and the fourth and final report some time thereafter.

In the one study completed by the Advanced Systems Laboratory of AMF, Inc., it is noted that both in terms of leaks per 1,000 miles and reportable conditions, larger numbers of leaks occur on service lines than on main lines and that more reportable leaks occur in residential and single family buildings, than in commercial buildings. Yet, existing regulations call for leak surveys annually in commercial buildings, but only at 5-year intervals for residential buildings. Are 5-year inspections adequate for residential areas? Would more frequent surveys of residential buildings result in experience similar to main lines?

In 1974, I introduced one of the major bills providing for independence and additional authority for the National Transportation Safety Board (NTSB) in the surface transportation area. Legislation along these lines was enacted, and is now Public Law 93–633.

Again in 1974 in a Senate floor speech, I urged the Labor Department and the Department of Transportation to adopt six needed regulatory changes to improve and strengthen pipeline safety.

Earlier this year I urged HUD to implement a recommendation of the NTSB's Bowie report relating to gas migration.

On June 27, 1975, I introduced S. 2042, the Natural Gas Pipeline Safety Act Amendments of 1975. On September 12, 1975, the NTSB, in a letter to the Commerce Committee, strongly endorsed S. 2042. This bill would amend the Natural Gas Pipeline Safety Act of 1968 to—

(1) provide that in the "design" of pipeline facilities that special consideration be given where subsequent excavation activity is likely;

(2) strengthen the technical Pipeline Safety Standards Committee by requiring at least two meetings annually, one of which will be for the purpose of considering the reports and recommendations of the National Transportation Safety Board, a Federal independent Agency charged with investigating accidents;

(3) provide for the establishment of statewide utility coordinating councils and encourage local coordinating councils and excavation damage prevention programs under which excavators will notify local utility coordinating councils of contemplated excavations, preferably by a one-call central system, and such local utilities will then follow up by marking their lines and otherwise assisting excavators in averting damage to underground lines;

(4) require greater reporting of gas leaks;

(5) assure that required utility plans include provisions for emergencies and procedures in response thereto, and a program to educate customers on the dangers of leaks;

(6) require each operator to maintain a log showing the receipt and handling of gas leaks and emergency reports;

(7) direct the Secretary of DOT to evaluate the performance of the respective States and require annual indepth evaluation of at least two States;

(8) delineate nine specific priority areas for research and development;

(9) provide for increased personnel training authority; and

(10) authorize a 3-year, $30.6 million program including full Federal funding for a safety engineer and from one to three inspectors in each State depending on the miles of pipelines and the needs of the respective States. This authorization level includes funds for the transitional quarter, as Congress moves to a new fiscal year.

The Nation's gas distribution system consists of over 1.1 million miles of buried pipelines. Such systems serve some 44 million residential customers. With an average family size of approximately 3.5, this would mean that there is a population-at-risk of some 150 million citizens.

When one looks at deaths from pipelines compared to other transportation accidents, it is true that the number of pipeline fatalities is relatively small. In 1973, for example, while 61,000 Americans lost their lives in transportation accidents, only 70 of these deaths resulted from pipeline accidents.

While natural gas is a safe, clean and until recently, a very inexpensive form of energy, it is also potent. Its potency, and its potential for catastrophe, as well as existing problems, underscore safety concerns.

Gas distribution systems are plagued with leaks, an estimated 900,000 such leaks in 1973 or an average of approximately one leak per mile. The Washington Gas & Light Co. in 1973 estimated that it checked 80,000 residential leaks and that one-quarter, if left unattended, were serious enough to cause an explosion. Projecting this local experience nationwide would mean that some 225,000 of the 900,000 leaks might be potentially explosive.

Fortunately, very few of these leaks produce the spectacular blasts that grab headlines, such the Bowie, Md., and Annadale, Va., explosions locally a few years ago. However, while citizen concern is high in the wake of such disasters, such concern recedes with the passage of time, that is until another disaster occurs. We are, I fear, experiencing such a period of complacency now. And in this business, complacency, when the potential for catastrophe looms so large, has no place.

As the Washington Post concluded in a 1974 editorial following the rash of explosions in this region:

> Meanwhile, when and where will the next blowup occur? Until Federal and state officials, not to mention the gas companies themselves, take the problem with more seriousness, the accident rate is not likely to go down. It may even go up, like the homes and buildings in the blasts.

The National Observer in a 1973 article entitled, "Gas Pipelines—They Leak", interviewed Mr. Barry Sweedler of the NTSB who is one of the Nation's foremost experts in this area. Mr. Sweedler is quoted as saying:

> It's difficult to say if we're having more accidents each year or not. In some recent accidents we've been extremely lucky. If they'd happened a few miles down the line, or at another time of the day, the death rate would be very much higher. I don't foresee a drastic reduction in the number of serious accidents unless action is taken in a number of areas. . . . So far we have been lucky.

We have been lucky. One shudders to contemplate, for example, the catastrophe that could have resulted in the April 1974 New York City 24-story office building explosion. The time of the explosion saved us.

No one was killed although seventy individuals were injured and damage amounted to approximately $10 million. How long can we count on a lucky time? Yet, I see little evidence of the sense of urgency, which I believe is demanded.

I am hopeful that these legislative and oversight hearings will result in a new sense of urgency and in the enactment of S. 2042, which I am convinced will bring about improvements in pipeline safety for the American public.

Senator HARTKE. Thank you for your very kind statement, Senator Beall.

Our first witness this morning is Mr. John Barnum, Deputy Secretary, Department of Transportation.

Mr. Barnum, there are some witnesses who want to present statements and I think it would be appropriate for you to comment on their remarks. We would like you to present your testimony, step aside to give the others a chance to testify and then you will be recalled to respond to their comments. Also I will pose questions to you at that time.

STATEMENT OF HON. JOHN W. BARNUM, DEPUTY SECRETARY, DEPARTMENT OF TRANSPORTATION; ACCOMPANIED BY JOSEPH CALDWELL, DIRECTOR, OFFICE OF PIPELINE SAFETY

Mr. BARNUM. I would be pleased to do that, sir.

I appreciate the opportunity to appear before you today to discuss the Department's pipeline safety program.

Several major events demonstrate the efforts of DOT and the administration to strengthen the pipeline safety program.

The recent reorganization to which reference has already been made, has taken place to increase our ability to carry out our pipeline safety responsibilities. Effective July 1, 1975, the Materials Transportation Bureau (MTB) was established as an operating element in the Department with responsibility for two programs, pipeline safety and hazardous materials. The Bureau is to have the same organizational status as the existing DOT operating administrations. The Director of the Bureau reports directly to the Secretary. Heretofore, of course, both activities were conducted in separate offices reporting to the Assistant Secretary for Environment, Safety and Consumer Affairs. That office will continue to have policy and oversight responsibilities for the program, just as it does for other safety programs. With the expanded scope of responsibility and the growing complexity of both the hazardous maferials and pipeline safety programs, we believe it has become imperative to establish this new operating element to focus on the safe movement of natural gas, oil, and other hazardous materials in commerce. Within MTB the pipeline safety functions will be carried out by the Office of Pipeline Safety Operations (OPSO).

Concurrent with the establishment of the MTB, we have a Department management analysis team conducting an in-depth study of the Headquarters and Regionl Offices of OPSO. This survey will cover organization, authorized functions, staffing, and program evaluation and effectiveness in order to obtain a current, overall view of our pipeline safety operations. The team is visiting a number of State agencies

which are involved in the pipeline safety programs, and it is discussing the program with representatives of the gas and liquid pipeline industry to learn and evaluate their views of the program.

The Department's pipeline safety responsibilities were changed or increased by the enactment of several statutes other than the Natural Gas Pipeline Safety Act of 1968. In November 1972, an amendment to the Department of Transportation Act transferred to the Secretary of Transportation the Federal Railroad Administrator's authority to issue safety regulations for pipelines transporting liquid hazardous materials under the Transportation of Explosives Act. This authority has been delegated by the Secretary to the MTB. In addition, enactment of the Mineral Leasing Act Amendments (Public Law 93–153, November 16, 1973), of the Transportation Safety Act of 1974 (Public Law 93–633, January 3, 1975), and of the Deepwater Port Act of 1974 (Public Law 93–627, January 3, 1975) have resulted in certain additional pipeline safety responsibilities being placed in MTB. These additional functions have expanded the scope of OPSO activities. While the Department has had adequate resources to carry out an orderly development of the Federal pipeline safety program, the Department will be requesting for fiscal year 1977 additional resources to increase the program's effectiveness and to support pipeline safety requirements under the recently enacted laws.

MTB has responsibility for the safety regulation of all pipelines and associated storage facilities used for transporting in commerce in the United States hazardous materials in gas or liquid form, including liquefied natural gas. It is also responsible for the regulation of offshore pipelines, including the regulation, in cooperation with the Department of the Interior, of those pipelines on the Outer Continental Shelf. We have amended 22 times the Federal Gas Pipeline Safety Standards adopted in August 1970. We believe these amendments represent significant improvement of our safety requirements. The amendments include those respecting control of corrosion, LNG, marking pipelines to prevent outside force damage, and odorization of gas in interstate lines. In addition, MTB has many gas pipeline rulemaking proposals pending final action, including a general updating of all references to industry publications, new or amended rules for offshore pipelines, procedures for handling a gas emergency, and precautions against disturbing cast iron pipe. The latter two proposals are based on recommendations of the National Transportation Safety Board. The office is now working on a comprehensive set of proposed amendments to the LNG safety standards based on its recently completed study of safety procedures for the handling and storage of LNG. Other rulemaking projects underway are intended to advance the Federal standards in light of new technology and changing industry practices.

Regarding liquid pipelines, the standards have been amended five times since responsibility for that program was transferred to the Secretary in 1972. OPSO has also recently published an NPRM to upgrade the safety requirements for offshore lines, including those leading from a deepwater port.

To support and guide us in regulatory activities, we have recently completed or have underway 12 contract studies covering such subjects as LNG, odorization, plastic pipe, rapid shutdown of failed pipeline systems, offshore pipeline safety, and stress corrosion cracking.

New or amended rules in these areas will provide a higher degree of safety in pipeline systems and we are continuing to evaluate the effectiveness of our regulatory program to determine other areas that require changes or additions. The additional knowledge gained from the studies will also be made available for general use by pipeline operators.

As you know, before a proposed gas pipeline standard can become final, the Natural Gas Pipeline Safety Act requires that it be submitted to the Technical Pipeline Safety Standards Committee for review as to reasonableness, practicability, and technical feasibility. The most recent committee meeting was in October 1974, and another is scheduled for November of this year. It is anticipated that more frequent meetings will be held to match the needs of our regulatory program.

The committee's cross section of expertise has provided a valuable source of constructive criticism and suggestions to make the regulations more effective and more representative of the various interests concerned. OPSO has also consulted with the committee on an informal basis at various stages of its rulemaking process and has consulted on an individual basis with various members in areas where it could use individual expertise. The Department favors continuing the committee in its present form.

I would like to highlight some of the other significant strides we have made in the pipeline safety program.

As you know, the Natural Gas Pipeline Safety Act of 1968 seeks the cooperation of State agencies through their voluntary assumption of direct safety and enforcement responsibilities over all intrastate gas pipeline facilities subject to the act. The response by the States in assuming this responsibility has been good. In 1968 only two States had legislation that permitted them to participate under section 5(a) certification. This year, of the 52 jurisdictions, which are the 50 States, the District of Columbia and Puerto Rico, that are eligible to participate, 51 are participating, 44 under a section 5(a) certification and 7 under a section 5(b) agreement. New Jersey is the only State not participating in the program; the pipleine operators in that State are subject to direct OPSO authority. I feel this is an indication of the States' willingness to share in the responsibility of this cooperative Federal/State safety effort. In order to work closer with the States, we are continuing a series of annual regional meetings with the State agencies to elicit their views and recommandations to strengthen our cooperative program.

A key element in the act relating to State participation is the provision for Federal assistance to cover up to 50 percent of a State agency's cost of personnel, equipment, and activities in carrying out its gas pipeline safety program. For fiscal year 1975 we allocated $1,158,000 in the form of grants-in-aid to the 41 States that requested such funds. The administration has requested appropriations of $1.8 million for fiscal year 1976 for this assistance, and the administration's bill, S. 2183, would provide authorization for $2.5 million for fiscal year 1977. It is most important that we continue to work with the States to assist them in carrying out a viable program.

A strong effort by OPSO is being made to inspect the facilities of pipeline operators to determine their compliance with safety standards.

This past year we expanded OPSO field offices from the one Houston, Tex., office, which was established in 1970, to five. The four new offices are located in Philadelphia, Atlanta, Kansas City, and San Francisco, and they are currently operational. A total of 12 additional people have been added to man the 4 OPSO field offices using the additional positions provided for this purpose in the fiscal year 1975 budget. This will enable closer monitoring of the participating States and those intrastate pipeline operators directly under the jurisdiction of the OPSO. The Federal enforcement effort regarding intrastate operations is an essential adjunct to the State enforcement effort since many States do not have full jurisdiction of all gas pipeline facilities within their borders.

Over the past 3 years, we have provided training for approximately 3,000 State and industry personnel, including courses directed to the inspection and evaluation of pipeline facilities, the investigation of pipeline failures, and orientation of small operators as to program requirements. New courses are being developed and we plan to expand this program to meet more effectively the needs of the State agencies as well as the industry. We feel that this training has significantly upgraded the safety expertise of State and industry personnel.

Notwithstanding what we regard as substantial progress, some areas of the program have had problems. The words of the statutes outlining the activities of various agencies have created problems of overlapping jurisdiction. For example, the Department has for some time been attempting to reach a mutually satisfactory agreement with the Federal Power Commission concerning safety regulatory jurisdiction of interstate gas facilities, particularly LNG facilities, and with the Department of the Interior concerning safety jurisdiction over pipelines on the Outer Continental Shelf. In the case of the jurisdictional problem with the FPC, the administration's bill would clarify the Department's role in regulating the safety of interstate pipeline facilities by precluding the FPC from attaching to the issuance of certificates of convenience and necessity a condition that applicants comply with safety standards, for pipeline facilities or the transportation of gas, other than those standards prescribed by the Secretary of Transportation.

This amendment would not preclude the FPC from taking "safety" into account in deciding whether to issue a certificate. It would merely serve to restrict such consideration to one set of Federal safety standards. In this connection, the matter of siting of LNG facilities has been raised by the committee. At the present time, the administration is evaluating the policy relating to siting of those facilities and ascertaining the most effective methods for implementation of the policy. A decision on this matter is expected in the near future.

In the case of the offshore jurisdictional problem, we are seeking to reach an agreement with the Department of the Interior to delineate areas of offshore responsibilities for each Department. This matter also is under consideration by the administration, and a solution to the problem is anticipated in the near future. Additionally, we anticipate difficulties in identifying and causing the examination of all those pipelines on Federal lands which have recently become our responsbility under the Mineral Leasing Act, as amended.

With respect to the National Transportation Safety Board (NTSB), OPSO works very closely with them. We have established a good

joint system of communications, procedures, and hearings coordination relating to the investigation of accidents. This minimizes duplication of effort in investigating significant incidents and maintains a cooperative relationship between NTSB, our office, and the appropriate State agency.

The NTSB, as a result of their investigations, has made 92 recommendations to OPSO and its predecessor organizations. Each NTSB recommendation receives a thorough analysis. OPSO has taken substantially the same action suggested by NTSB in 20 of the recommendations. Fifty-eight recommendations are under active consideration or study, and in 14 cases OPSO has disagreed with the recommendations for various reasons. OPSO is continuing to review and give careful consideration to the recommendations and comments of NTSB.

Ever since it was established, the Department has coordinated its activities with those other Federal agencies also concerned with matters relating to pipeline safety. We have attempted to keep those agencies fully informed and to assure that any input others have would be considered in the Department's decisionmaking process. In addition to the Federal Power Commission and the Department of the Interior, these agencies include the Environmental Protection Agency, the Department of Labor, the Department of Commerce, the Federal Preparedness Agency, the Department of Defense, the Department of State, and the Department of Housing and Urban Development.

Of particular interest has been our participation in the evaluation of the engineering, construction, and operating proposals for the trans-Alaska crude oil pipeline. This is being done through membership on the Technical Advisory Board to the Department of the Interior's Task Force on Alaska Oil Development and through contact with the Office of the Secretary of the Interior. OPSO is taking action as necessary to insure that the pipeline is in conformance with DOT safety standards.

OPSO has continually cooperated to the degree possible in sharing its information with all concerned parties. It has provided statistical information, advice, and consultation with other Federal and State agencies, local governments, industry associations, and the general public to aid in the specific investigations or problem analyses relative to pipeline safety. We have worked with these groups to arrive at acceptable solutions to the pipeline safety problems identified. OPSO has shared with and assisted the State agencies in developing techniques on procedures for operator surveillance and methods of solving common problems.

Before closing, I would like to refer briefly to the proposed legislation you have before you which would amend the Natural Gas Pipeline Safety Act. The administration's bill, S. 2183, would authorize funding for the program through fiscal year 1977, improve the role of State agencies in the Federal program, and reinforce the existing requirement for uniform Federal regulation of interstate gas transmission lines.

Apart from these needed amendments, other changes in the Federal gas pipeline safety program which are appropriate can and will be handled under the authority of the existing statute or the Transportation Safety Act of 1974. This latter statute extends Federal regulatory

authority over gas pipeline and storage facilities which are not subject to the Natural Gas Pipeline Safety Act; namely, gathering facilities outside populated areas. However, the new law does not change the Natural Gas Pipeline Safety Act's prohibition against prescribing the route or site of a gas pipeline facility. The Department and other Federal agencies are now reviewing whether there is sufficient need to change this policy.

A report of the Department's views on S. 2042 has been submitted for the committee's consideration. In general, the Department opposes S. 2042 because the recommended amendments are unnecessary when examined in light of current authority and ongoing activities.

I regret, Mr. Chairman, and Senator Beall, we were not able to communicate our letter in respect to S. 2042 until this week. We would be pleased to discuss the particulars of that letter and the reasons that you have in making the proposals, Senator Beall.

In conclusion, Mr. Chairman, I feel that the regulatory program for pipeline safety 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 act. This concludes my prepared statement and I will be happy to answer any questions you or the members wish to ask.

After statements by your other witnesses, I would be pleased to respond to any questions.

Senator HARTKE. Senator Beall has a couple of questions he would like to ask specifically because he has to go to another meeting.

Senator BEALL. Thank you, Mr. Chairman. I won't ask all the questions I have in mind. Unfortunately, I have to go to another meeting.

Naturally, I am disappointed that the Department hasn't seen fit to endorse S. 2042, particularly when last year we expressed the same concerns and the Department said it wanted to work with us. We have not heard from you since.

But, I have some concern about the reports that were authorized, for which appropriation was made, and enacted into law in 1973. In the annual report for 1974, the Department indicated that these four reports would be completed by May 1975. It is now, of course, September 1975, and we have received only one report.

Could you comment on why the reports have not been completed? Or when we can expect them to be completed?

Mr. BARNUM. I can't give you an answer at this minute. I would like to submit for the record a full statement and explanation as to where a particular report stands and when we can expect it to be available to the committee.

Senator BEALL. Can we have it expedited so we might have the benefit of the report before we get to marking up the bill?

Mr. BARNUM. I can assure you that we will.

[The information follows:]

STATUS OF REPORTS

Three of these reports were scheduled to be completed in May and the report on the overall safety of gas distribution systems was scheduled to be completed a month after the other reports were completed because it includes an analysis of the other three reports. The primary reason that two of the three reports were not completed in May was because the contractors elected to gather information

from the industry by the use of a questionnaire. The use of a questionnaire caused a considerable delay in the completion of these two contracts.

Two of the reports were presented to the Committee during the hearings. These deal with plastic materials used in gas pipeline facilities and the tools and procedures used by gas distribution systems. The report on odorization of gas distribution systems is scheduled to be completed by the end of October. The report on the overall safety of gas pipeline distribution systems is scheduled to be completed by the end of November. The Committee will be supplied with a copy of these two reports as soon as they are available to our Office.

Senator BEALL. I was also interested in the DOT report entitled "Federal/State Relations in Gas Pipeline Safety," which indicated there was need for improvement in industry personnel to cover State pipeline programs. Yet, in your statement you indicate some dissatisfaction with the personnel engaged in the program. Your verbal statement seems to conflict with the departmental report that came out on that subject.

Mr. BARNUM. My statement here refers to the techniques of training rather than the quantity of training. We all recognize that we could improve our training capability to the extent we are able to expand the program.

Senator BEALL. And there is a necessity to do that?

Mr. BARNUM. This is correct. This is one of the reasons we would like to expand our internal program and why we have recommended a substantial increase in the 1977 budget.

Senator BEALL. For the record would you indicate for me the practice for training industry personnel? What arrangements are there for paying the bill? What is the average cost for training industry personnel? Do we have an evaluation that shows that training of industry personnel has made a difference in the kind of job that is being done?

Mr. BARNUM. I would like to submit a complete report on that training program with the numbers of people that have gone through and the allocation among the States and what their average cost is.

Senator BEALL. All right.

[The report follows:]

TRAINING OF INDUSTRY PERSONNEL

Very early in the program, it was apparent that the small operators were having difficulty in understanding and complying with the regulations because of inadequate staffing and resources. Therefore, a 2-day seminar, Safety Requirements for Gas Pipeline Systems, was developed and is being conducted to help the small gas operator understand the Federal gas pipeline safety requirements. However, attendance at the seminar was not restricted to small gas operators because industry personnel from the large gas companies have also been attending. In order to make these seminars more accessible to the small operator, they have been conducted throughout the country in cooperation with the State agency personnel.

Since the initiation of the 2-day seminar in April 1973 and as of August 31, 1975, 3,011 individuals have been trained; including 2,569 industry representatives; 139 representatives from the Department of Housing and Urban Development regional offices; 202 representatives from the States; and 101 others.

Industry personnel that attend seminars are not required to pay for their attendance. The Department felt that assessing a charge to the attendees would discourage attendance by the small operators. These are the operators that would benefit the most from this course. The only direct cost to the Department for the 2-day industry seminar consists of the instructor's salary and travel expense to the site of the seminar. Industry representatives and others that attend the seminar do so at their own expense.

The feedback from representatives of these small operators and State regulatory agencies confirms that the small operators are now much better informed about the requirements for pipeline safety. And, they are actively responding to these requirements. Both the individual failure reports and the annual reports submitted to OPSO by small operators have improved significantly during the last two years. We attribute this improvement, in part, to the training. The average training cost per graduate is approximately $42.00.

Senator BEALL. Also, in our bill we require that the Technical Pipeline Safety Advisory Committee have a minimum number of meetings.

Mr. BARNUM. Where it should meet twice a year?

Senator BEALL. Yes. You indicate they last met in October 1973 and they were to meet in 1974. Since 1972, I think they have only met twice.

Mr. BARNUM. That is a very fair criticism, Senator Beall, and I think it is a matter that your having brought it forcefully to our attention, does not require legislation.

Senator BEALL. But as I stated, unless we require things be done, they seem not to get done. Maybe a temporary flurry of activity as the result of hearings, or following a couple of explosions, but when the pressure or urgency disappears we get into the irregular performance that we have had in the past. Is that a probability?

Mr. BARNUM. That is a high probability, Senator. But I can assure you that as long as I am on the watch there will be at least biannual meetings.

Senator BEALL. Unfortunately, your tenure, like mine, is up for renewal.

Mr. BARNUM. I am not any more concerned about it than you are, sir.

Senator BEALL. I'm concerned. I do have quite a few questions and I think rather than belabor you with these questions, I will submit these for the record [1] and perhaps we can get along with the witnesses.

Mr. BARNUM. We will attempt to supply the answers promptly so you will have them for markup.

Senator BEALL. I would like to point out though, before terminating my questions, one of the things that causes me concern is the fact that I had a letter from a Maryland farmer out in the Middletown Valley about 40 miles west of here and there is a 30-mile gas transmission line going through the farmer's property. He wrote and indicated that he was upset with the fact that the gas transmission line was close to his house and the house of his daughter and that it was not buried deep enough because in the course of his farming activities he would be hitting the line.

We have received word back from your Department that as far as you were concerned the line was far enough away from the houses. That may be true.

But you also said the line was buried 30 to 36 inches below the surface and since that is what the law said was required, that was sufficient. But the farmer is saying to us that "I need 5 feet in order to keep from hitting it."

Maybe he does or doesn't need that much under the circumstances. We are not talking about a residential line, but a major transmission

[1] See p. 43.

line being buried where a farmer is actively engaged in farming activities. This man says that in the course of those activities if you bury it only 30 inches it will be hit by his equipment.

I don't think where the laws says we have to go to 30 inches that should end the matter; we should take a look at it and see if there is a particular problem in that area requiring us to go beyond the required depths. Perhaps there would be serious damage caused if we didn't do that. Wouldn't that be a better approach than to write back saying what was said?

Mr. BARNUM. I agree.

Senator BEALL. You have left me speechless. What should we do about it if you agree with it?

Mr. BARNUM. Two things should happen. First, when a logical problem of that nature is brought to our attention I would like to be aware that such a problem is in the offing. I don't know to whom you addressed the letter, whether to the Secretary or Office of Pipeline Safety. I do not recall that particular response that you have reference to.

Senator BEALL. We got the reply from the Acting Director of the Materials Transportation Bureau.

Mr. BARNUM. Well, that——

Senator BEALL. Maybe we didn't shoot high enough up. I guess we thought the people charged with the responsibility might be compelled to do someting about it.

Mr. BARNUM. The way you have described it, it sounds like such a logical problem, whether it is a question of where you measure the 36 inches or what unique farming this individual may be in, may be relevant to the factual context in which the question is raised. Certainly, I do not resist looking at what would appear to be a generic problem.

Senator BEALL. To put this in proper perspective, I ask unanimous consent that the letter be placed in the record.

Senator HARTKE. It will be placed in the record.

[The letter follows:]

DEPARTMENT OF TRANSPORTATION,
MATERIALS TRANSPORTATION BUREAU,
Washington, D.C., September 17, 1975.

Hon. J. GLENN BEALL,
U.S. Senate, Washington, D.C.

DEAR SENATOR BEALL: This responds to your transmittal of August 15, 1975, to the Congressional Liaison Office, requesting the Department's views on a letter from Mr. and Mrs. Grayson E. Summers of Middletown, Maryland, regarding the safety of a proposed 30-inch interstate natural gas transmission line.

The Summers are concerned that the pipeline would be located only 200 feet from their home and their daughter's home, and would like it to be located further away. While the Department has safety regulatory jurisdiction over interstate natural gas transmission lines under the Natural Gas Pipeline Safety Act of 1968 (NGPSA) (49 USC 1671 et seq.) this statute does not authorize the Department to prescribe the location or route of an interstate transmission line. Routing is normally a matter subject to local control as well as agreement between the landowner concerned and the pipeline company. To provide for adequate safety, however, the Federal gas pipeline safety standards in 49 CFR Part 192 (copy enclosed), which are administered by the Department under the NGPSA and would govern the design, construction, operation, and maintenance of the 30-inch line, vary by degree in many instances according to a pipeline's location. In general, a higher degree of safety is required as pipelines approach buildings intended for human occupancy or occupied outside areas.

Further, the Summers would like the pipeline to be buried deeper than five feet to provide adequate soil coverage in which to conduct farming activities

without interfering with the pipeline. The Federal safety standard in 49 CFR 192.327 requires that if the line is buried, it must be constructed with at least 30 or 36 inches of soil cover, depending on the pipeline's location. Of course, a pipeline company may voluntarily choose to bury its pipeline deeper than the required level; and this, too, would be a matter for agreement between the landowner and the company.

I hope that this information will be of assistance to your constituents.

Sincerely,

HERBERT H. KAISER, Jr.,
Acting Director.

Senator HARTKE. What about the director, when is he coming aboard?

Mr. BARNUM. I anticipate he will be sworn in on the 30th of September.

Senator BEALL. That's all I have now.

Senator HARTKE. Did you wish to ask questions now, Senator Ford?

Senator FORD. I might ask a question or two in relation to the Senator's question about the pipeline being buried 30 to 36 inches. Is there any easement, is the farmer allowed to cultivate over a pipeline?

Mr. BARNUM. Yes; he is.

Senator FORD. How wide is a normal easement that would go through farming property?

Mr. BARNUM. I couldn't answer that but, Mr. Caldwell, can you answer?

Mr. CALDWELL. That would vary to the individual needs of the operator.

Senator FORD. What would be the normal easement for a pipeline?

Mr. CALDWELL. For a major transmission line the right-of-way could vary for a single line from 25 to 50 feet; if they have more than one line it could be wider than that.

There is no set standard for the width of rights-of-way.

Senator FORD. There is no set standard?

Mr. CALDWELL. No set requirement.

Senator FORD. In your testimony you pointed out that you are cooperating with the States; could the States set an easement on a pipeline?

Mr. BARNUM. They couldn't get a regulation that would conflict with our regulation with respect to interstate lines. That is something to which the Department has exclusive jurisdiction.

Senator FORD. But connection of an intrastate line could come under jurisdiction of the States.

Mr. BARNUM. I imagine they could, yes. I would have to check with the lawyers on this but I imagine they could set a minimum width of easement for given sizes of pipeline.

Senator FORD. How much dependence do you place on States to cooperate with you and help you in this endeavor of pipeline safety, particularly with respect to depth of lines and that sort of thing? Do you work in conjunction with the States? Do they have any jurisdiction at all or work with you in any way at all in interstate operations?

Mr. BARNUM. They work a great deal with us in the inspection program and, of course, they have their input in the regulation drafting that the Office of Pipeline Safety Operations performs.

Senator FORD. You are saying to me that there is a Federal regulation that requires, for example, 36 inches in depth, and no right-of-way requirement?

Mr. BARNUM. No minimum?

Senator FORD. No minimum. The requirement is 30 to 36 inches then, that is the deepest interstate pipelines would be required to be buried?

Mr. CALDWELL. Yes, sir, this is the amount of cover required. It depends on various circumstances. There are I believe three conditions where depths are required. I can't quote the exact figures—but 36 inches would be the maximum cover required unless the conditions warrant special consideration by the operator. The operator always has the option of applying more cover if the circumstances require.

Senator FORD. Aren't you putting the major responsibility on the transmission line then? Is it their responsibility to secure the line, and work out the easement? Should this responsibility be placed on the backs of the pipelines or should there be other requirements?

Mr. BARNUM. I don't think those two propositions are necessarily inconsistent, Senator. Our standards do impose what we regard to be minimum safety requirements.

But within the bounds of the minimum safety standards that the Office of Pipeline Safety promulgates, it is indeed the responsibility of the operator to acquire the easement and then to make the determination whether that minimum standard can be met or whether he in a particular case should bury the pipeline deeper.

But, yes, that is indeed the responsibility of the individual operator.

Senator FORD. So that in essence you have minimum requirements that should be flexible but the sole responsibility of making a judgment of whether or not 36 inches is deep enough, or whether they should go 5 feet as the Senator from Maryland has said, is purely up to the discretion of the pipeline company?

Mr. BARNUM. Assuming he meets the minimum standards we establish.

Senator FORD. But 36 inches is just a flat standard though.

Mr. BARNUM. For one classification of pipelines, that is correct. Now the question from Senator Beall raises a question, if you will, as to whether or not that is deep enough for all pipelines and this is indeed something we should look at.

Senator FORD. What kind of farming would require a farmer to go lower than 36 inches?

Senator BEALL. I don't know. I am not that much of a farmer. Maybe you are a farmer.

Senator FORD. The deepest I know that you would cultivate would be what we refer to as breaking plow. That is turning the dirt over and that is about 12 to 14 inches.

Senator Beall. But you could have washing away of the soil.

Senator FORD. But, hopefully, he would be a good farmer and do contour farming and the other things that are important.

Senator Beall. Well, I am sure he is a good farmer.

Senator FORD. So he wouldn't allow his dirt to wash away.

Senator BEALL. I don't know that. But this farmer was concerned from his point of view that 30 inches was not enough. The point of all this was, the answer to me was that that was all the law requires, not whether or not they thought it was enough or whether there was a possibility that it would be enough. I don't like the answer coming back that says the law says 30 inches is enough and as long as the law says that, that's good enough. I don't think that is the kind of response

we ought to get. I don't know whether it is 5 feet, 30 inches, 10 feet, or what.

Senator FORD. This is the point I was getting to. They say 36 inches would be the maximum, then it is on the back of the pipeline to make that decision. I am sure they don't want to do more than they have to.

Senator BEALL. That is right.

Senator FORD. Maybe some of them would do a lot more than that. But the point is, you have minimum requirements and it is at the discretion of the pipelines to supervise and, survey the depth of the pipeline, and to decide where it goes. This is not being initiated where it should be on interstate problems.

Senator BEALL. It would seem to me the depth of the line depends also on the design and use to which the line is put.

Senator FORD. And it is the terrain also.

Senator BEALL. Right; and just saying 30 to 36 inches I am not sure is good in every case.

Senator FORD. If the pipelines were told what to do they would do it. If you leave it to their discretion they make a judgment and that judgment is changed in all probability 10 years from now when the pipeline is going through a farmer's property.

Mr. BARNUM. It may also have been that what was 36 inches of depth when the pipeline was put in turns out not to be 36 inches of soil. This was the question that Senator Beall brought out.

Senator FORD. Whose responsibility is it to bring it back up to 36 inches though?

Mr. BARNUM. I want to inquire into that because apparently there is not any ongoing requirement that a pipeline installed at the minimum depth required on occasion of construction has to be kept at that particular depth throughout its life.

Senator FORD. But this is part of the problem, you see, John. We do a lot of things as we sit here, and I have had 4 years of trying to carry out Federal regulations and programs at the State level. Some legislation is better than none at all, I suppose, but too often it isn't thought through. Ten years from now, the depth may be at 24 inches instead of 36 inches and you have a hazard. There is no surveillance, no requirement that they continue to keep that pipeline at 36 inches.

You can't blame the pipeline because you give them this authority. If anything happens you have done your job and it is their responsibility. I am not trying to protect the pipeline, but I am trying to protect those people out there. The pipeline people ought to have set standards, certain requirements, and these should be long term.

Mr. BARNUM. I agree but there are three separate problems. First, what is the minimum depth. Secondly, what conditions should be imposed on pipeline operators by the office to vary the depth according to local conditions? Thirdly, what continuing responsibility should there be on the pipeline operator to maintain the depth that has been determined to be appropriate at a particular place.

I think that is a problem that we should address, Senator.

Senator FORD. You say you are going to have a Dirctor of this Division beginning December 3?

Mr. BARNUM. September 30, the Director of Material Transportation; yes.

Senator FORD. How long have you had a vacancy?

Mr. BARNUM. The bureau was established July 1 and we have had an Acting Director, Herb Kaiser, who was at the same time the Deputy Assistant Secretary for Environment, Safety, and Consumer Affairs, under whose aegis this office operated.

Senator FORD. What have you been doing since 1968?

Mr. BARNUM. You must be referring to the Office of Pipeline Safety. That would not be the Materials Transportation Bureau.

Senator FORD. It is all going to be under that office, right?

Mr. BARNUM. That is correct.

Senator FORD. That's all I have, Mr. Chairman.

Senator HARTKE. All right, we will go to the next witness and call you back later to respond to additional questions. At this point in the record, I want to insert the committee's prehearing questions and the Department's responses.

[The questions and answers follow:]

OFFICE OF THE SECRETARY OF TRANSPORTATION,
Washington, D.C., June 19, 1975.

Hon. WARREN G. MAGNUSON,
Chairman, Committee on Commerce,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: In response to your letter of June 12, 1975, regarding oversight hearings on the Natural Gas Pipeline Safety Act of 1968, I have enclosed the responses to the questions that you posed.

Sincerely,

JOSEPH C. CALDWELL,
Director, Office of Pipeline Safety.

Enclosure.

Question 1. List all enforcement actions under the Natural Gas Pipeline Safety Act which have been brought by both State and Federal authorities since enactment of the Act. Please include the following information:

(*a*) What was the date of violation?
(*b*) What was the nature of the violation?
(*c*) Who initiated the action?
(*d*) What civil penalty was assessed?
(*e*) How was the case disposed?
(*f*) What cases are still pending?

Response. For purposes of establishing uniform terminology for use by OPS and the State agencies, definitions were established in which "Enforcement Action" was defined as follows:

* * * Formal action to enforce Federal or State gas pipeline regulations where (1) failure to comply subjects a gas pipeline operator to penalty under law, (2) a monetary sanction is imposed, or (3) a court injunction is sought.

Appendix A is a list of the 68 enforcement actions initiated by OPS under the Act. Additionally, OPS personnel initiated 3098 compliance actions by written communication or personal contact with pipeline operators. As a result of these contacts, OPS personnel identified safety problems, recommended corrective actions, and worked with industry personnel in achieving a satisfactory solution to the problems. This approach to enforcement was developed due to the lack of OPS compliance personnel, and enabled a small field force, coupled with headquarters personnel temporarily assigned to enforcement duties to reach a significant number of operators and point out safety deficiencies.

A review of the information submitted by the States indicates that the States had 79 enforcement actions in 1973 and 98 in 1974. OPS does not require the States to provide it specific details relating to enforcement actions. Prior to 1973, the information obtained from the States regarding enforcement actions was inclusive. In addition to the enforcement actions, the States had 3479 compliance actions either in writing or orally in 1973 and 3443 in 1974 without resorting to formal enforcement actions.

Question 2. How many States participating in the Gas Pipeline Safety program regularly investigate pipelines for compliance with the Federal regulations? How many investigators does this involve?

Response. In 1974, of the 51 State agencies (including the District of Columbia and Puerto Rico) that participated in the Federal gas pipeline safety program, 23 requested to serve as agents of the Department of Transportation to aid in enforcing Federal safety standards on interstate transmission facilities. Of the 23 agents, 17 of this group actually reported 246 inspections made on interstate pipelines. The 17 States in their most recent annual reporting show that about 45 man-years of effort (involving both full and part-time investigators) go into their interstate and intrastate gas safety program each year. Approximately 10 percent or 4.5 man-years of this effort is devoted to inspecting interstate gas facilities. Our estimate as to the number of part-time and possibly full-time persons so involved is about 25 for the 17 States from which we have received data.

Question 3. What are the office's plans for a Federal field inspection force? Is such a force needed?

Response. The OPS field inspection force is implementing a program of monitoring State regulatory agencies, pre-selected surveillance evaluations, failure investigations and responses to specific inquiries by concerned persons. Surveillance of more than 2300 interstate and intrastate gas pieline operators (approximately 1900 operators under State jurisdiction and 400 under OPS jurisdiction), and of an undetermined number of gas sub-systems beyond the master meter are the principal functions of the field forces. The interface with the State regulatory agencies which, under agreements with the OPS, have safety jurisdiction over certain gas operators within their States, is aimed at developing more effective pipeline safety programs. The field force also responds to inquiries by the interested public and local governments.

Experience gained during a four year period by the activity of a field office in Houston demonstrated the need for additional field coverage. Subsequently, four additional field offices have been placed in operation since January 1975.

With the increased staffing appropirated for compliance purposes in the FY–1975 budget, the field forces effort has been increased. The impact of this increased field activity will be reflected in future plans.

Question 4. Indicate the specific allocation of personnel by function within OPS since FY 1968. How many staff positions has OPS requested from the Department in each fiscal year since 1968? How many were granted? What impact has this had on your program?

Response. The assignment of personnel by function within OPS, beginning with fiscal year 1969, is shown in Appendix B. The number of staff positions that OPS requested versus the number available for each fiscal year since 1969 is also shown.

With the staffing that was available, OPS has been able to implement a broad general program which has included developing and issuing basic safety standards and initiating a compliance and enforcement program as summarized below:

(a) The basic program has been directed to responding to immediate demands. Limited effort has also been devoted to in-depth analysis, long-range planning, and systematic pursuant of alternative means to resolve pipeline safety problems.

(b) Enforcement has consisted primarily of surveillance of State regulatory agencies and operators directly under OPS's safety jurisdiction.

Question 5. Does the Office of Pipeline Safety have a five year projected regulatory program plan? If so, please submit a copy of it. If not, why not?

Response. Attached as Appendix C is a detailed breakkdown of the various regulatory projects which OPS plans over the next four fiscal years.

In light of the many new sources of supply of gas and oil, OPS is planning additional or amended Federal safety standards in areas not comprehensively covered by Federal pipeline safety regulations. Foremost of these areas is pipelines lying offshore, including those to be associated with deepwater ports. OPS will publish a follow-up Notice to its advance notice of proposed rule making regarding offshore gas pipelines (39 FR 34568, Sept. 26, 1968) early in fiscal year 1976. Also of prime importance is the establishment of independent Federal safety standards (rather than referencing an industry code) for the transportation and storage of liquefied natural gas (LNG). New standards for LNG should become effective in fiscal year 1976. Also needed, because of the Trans-Alaska crude oil pipeline and the proposed Alaskan gas pipelines, are standards specifically relevant to gas and liquid pipeline transportation in an arctic environment. New rules should be proposed for these pipelines in fiscal year 1977.

Equally important is the continuing review, by OPS staff and through outside contractors, of those areas of pipeline transportation currently covered by Federal regulations to see if new or amended regulations are needed because of changing technology or operational methods or to improve the level of safety which the regulations provide. The following are examples of proposed or contemplated rule changes for fiscal year 1976 which have resulted from this activity: (1) Require operators to follow more detailed guidelines in preparing emergency plans for their systems; (2) Require operators to protect against foreseeable sources of damage when cast iron pipe is disturbed; (3) Allow the use of newly developed sealing processes on bell and spigot joints in lieu of the presently required mechanical leak clamps; (4) Update all references to industry codes to the latest published editions of those codes where the later editions provide improvements in pipeline safety.

Question 6. What is the Office's five year research program plan and how does this relate to OPS' regulatory program?

Response. The OPS five year estimate of technical investigation and applied research is contained in Appendix D. This is an OPS funded contract effort to obtain certain technical information necessary to formulate effective safety standards and develop program areas where the staffing, or a particular expertise, is not available, or it is not otherwise practicable with our permanent staff.

Initially, our efforts have been and are continuing to be directed toward areas where comprehensive safety standards did not or do not presently exist such as in the areas of corrosion (issued in 1971), handling and storing of liquefied natural gas (LNG), and pipelines in offshore and arctic environments. Also, our efforts have been and are still being directed to areas of known problems such as corrosion, transporting liquefied petroleum gas, rapid shutdown of failed facilities, plastic pipe, odorization of gas, outside force damage, and in-place evaluation of existing pipelines. As the state-of-the-art study contracts are completed, they will likely identify needs for future research or study to be performed either separately or jointly by the Federal government and/or industry.

The present demands being imposed upon the industry for an economic energy supply have made it necessary for the industry to rapidly develop pipelines and other related facilities capable of providing a dependable supply from new locations, new or different sources, in new environments, and in some cases use newly developed materials.

When comprehensive regulations are developed in areas such as for the handling and storage of LNG and pipelines in offshore and arctic environments, we will then have at least basic regulations that cover all safety significant areas for natural gas and liquid pipelines. Our technical investigation and research efforts will then be concentrated on improving the regulations and their application to specific areas where experience indicates or previous research has demonstrated a need and/or technology has been improved. Some of these areas already identified are: LNG vapor cloud dispersion, aging effect on pipeline coatings and plastic pipe, lack of equipment and procedures for the in-place evaluation of pipelines both onshore and offshore, and underground migration of gas and its filtering effect on gas odorants.

We believe the five-year program for technical investigation and applied research will fulfill our requirement for completing the development of comprehensive safety standards for both liquid and gas pipeline facilities. The program as set out is based on the level of staffing proposed for this Office in FY–76 and future years. It is also what we consider a workable time table for completion of the comprehensive regulations and resolution of the problems known to exist today. This program is also confined to areas where the industry or others are not presently performing or where it would be inappropriate for them to do so.

Question 7. Itemize the Office of Pipeline Safety's current research efforts, specifically including (1) the date each project began; (2) the date it will conclude; (3) the cost; (4) how such project relates to the regulatory program of OPS; and (5) what concrete benefits have accrued from the Office's past research program?

Response. A listing of OPS current and recently completed technical investigations and applied research efforts by title, dates begun, date completed or will conclude, and cost are shown in Appendix E.

Findings from these investigatory efforts are used directly in decisions relating to increased or modified regulatory activities. They provide the statistical information to identify and support needed regulatory or program changes, and they provide the technical information needed to develop appropriate regulations or other direction.

Past R&D efforts have been used to aid in the development of regulations, identifying problem areas for regulatory action, further research or study or other action. Some examples are: (1) The automated leak and statistical reporting system is developing a broad base of statistical information for use by industry and government in identifying problem areas, and of effectiveness of the regulation and various operating procedures. To date, the information has been used to develop more comprehensive regulations or programs in areas such as service lines, marking or pipelines, prevention of outside force damage, use of plastic pipe and education of operators; (2) The information gathered in the study of Ferrous Pipeline Processes, Detection and Control (corrosion) was used in the development of the corrosion control regulatons and is being used by operators in determining the most effective means of control on their system; and (3) Information obtained or being obtained in the Liquefied Natural Gas (LNG) study, Liquefied Petroleum Gas (LPG) study, Rapid Shutdown of Failed Facilities, and the four studies relative to gas distribution systems (odorants, plastic pipe, tools and procedure for in-place evaluation, and overall evaluation of distribution systems) will be used as guides in developing more comprehensive safety regulations or programs in those areas.

Some of the benefits that have accrued from past research and study programs are:

Development of sound regulations;

Identification of areas of regulations that needed change;

Identification of areas for educational and compliance needs; and

Provide industry with information on current techniques for use in developing and improving their pipeline safety programs.

ENFORCEMENT ACTIONS, NATURAL GAS PIPELINE SAFETY ACT OF 1968 INITIATED BY OFFICE OF PIPELINE SAFETY

Date of violation	Identification or case code	Nature of violation	Civil penalty assessed	Disposition of case
Dec. 27, 1968	Great Lakes Gas Transmission, Ohio.	Line operated over pressure; external damage to p/l during construction.	0	Order issued to reduce operating pressure.
Feb. 1, 1971	Andersonville, Ga., case No. FRI 106.	Failure to file inspection and maintenance plan (I. & M.).	$1,050	Civil penalty compromised to $350; collected $350.
Do	Alexandria, La	Failure to file I. & M. plan	20,000	Plan received, civil penalty waived.
Do	Burnside Gas and Fuel	do	2,000	Do.
Do	Roseland, La	do	2,000	Do.
Do	Mound, La	do	2,000	Company sold, civil penalty waived.
Feb. 15, 1971	Sorrento, La	Failure to file 1970 annual report.	2,000	Report received, civil penalty waived.
Do	Sunse, La	do	2,000	Do.
Do	Eastern Oklahoma Gas Co., Oklahoma.	do	2,000	Do.
Do	Southeastern Oklahoma Development and Gas Authority, Oklahoma.	do	2,000	Do.
Do	Wister, Okla	do	2,000	Do
Do	Tuttle Public Works Authority, Oklahoma.	do	2,000	Do.
Do	East Central Oklahoma Gas Authority, Oklahoma.	do	2,000	Do.
Do	Lineville, Iowa	do	2,000	Do.
Do	Remsen, Iowa	do	2,000	Do.
Do	Orlando, Okla	do	2,000	Do.
Do	Bailey Gas Co	do	2,000	Do.
Oct. 16, 1972	Roseland, La., case No. CPF 794.	Multiple violations of systems maintenance and record-keeping requirements of pt. 192 of title 49 CFR.	800	Pending.[1]
Apr. 25, 1973	Leitchfield, Ky., case No. CPF 764.	do	1,565	Do.

See footnotes at end of table.

ENFORCEMENT ACTIONS, NATURAL GAS PIPELINE SAFETY ACT OF 1968 INITIATED BY OFFICE OF PIPELINE SAFETY—Continued

Date of violation	Identification or case code	Nature of violation	Civil penalty assessed	Disposition of case
May 16, 1973	Pikeville, Ky., case No. CPF 739.	14 items of noncompliance with reporting maintenance, recording, and construction requirements of pt. 192 of title 49 CFR.	$2,000	Do.
May 17, 1973	Prestonburg, Ky., case No. CPF 740.	Failure to file I. & M. plan multiple violations of systems maintenance and recordkeeping requirements of pt. 191 of title 49 CFR.	2,450	Do.
July 24, 1973	Hornbeck, La., case No. CPF 815.	Multiple violations of systems maintenance and recordkeeping requirements of pt. 192 of title 49 CFR.	1,075	Pending.
July 25, 1973	Vernon Parish, La., case No. CPF 749.	Failure to file annual report for 1972. Multiple violations of system operation and maintenance and recordkeeping requirements of pt. 192 of title 49 CFR.	640	Do.
Aug. 21, 1973	Polaris Corp., Baton Rouge, La., case No. CPF 731.	5 items of noncompliance with abandonment and inactivation requirements, odcrization and general operating requirements of pt. 192 of title 49 CFR.	15,000	Pending.[1]
Sept. 28, 1973	Washington Gas Light, Washington D.C., case No. CPF 736.	2 items of noncompliance with environmental protection and safety requirements of pt. 192 of title 49 CFR.	7,820	Do.
Feb. 15, 1974	Tropigas Inc., Florida, case No. FRI 154.	Failure to file annual report for 1973.	350	Pending.
Do	McLouth Municipal System, case No. FRI 199.	do	350	Do.
Do	City of Clarence, Mo., case No. FRI 214.	do	350	Do.
Do	T. A. Wallace Co., Oklahoma, case No. FRI 225.	do	350	Civil penalty compromised to $150; collected $150.
Do	Wister Gas Co., Oklahoma, case No. FRI 226.	do	350	Pending.
Do	Dick Dowling Gas Co., Texas, case No. FRI 227.	do	350	Do.
Do	Easton Municipal Gas Co., case No. FRI 228.	do	$350	Do.
Do	Providence, Ky., case No. FRI 208.	do	1,000	Civil penalty compromised to $350; $350 collected.
Do	Mangum, Okla., case No. FRI 221.	do	1,000	Do.
Do	Millen, Ga., case No. FRI 195.	do	1,000	Pending.[1]
Do	Monroe, Ga., case No. FRI 196.	do	1,000	Civil penalty compromised to $500; $500 collected.
Do	Leitchfield, Ky., case No. FRI 206.	do	1,000	Civil penalty compromised to $350; $350 collected.
Do	Morehead, Ky., case No. FRI 207.	do	$1,000	Pending.
Do	Plains Gas Department Plains, Tex., case No. FRI 232.	do	350	Do.
Do	City of Sabinal, Sabinal, Tex., case No. FRI 223.	do	350	Do.
Do	Palm Bay Estates, Palm Bay, Fla., case No. FRI 193.	do	200	Civil penalty compromised to $100; $100 collected.
Do	Blackburn Gas Co., Jennings, Okla., case No. FRI 216.	do	200	Pending.
Do	Crystal Gas Co., Jennings, Okla. case No. FRI 217.	do	200	Do.
Do	Town of Gate, Okla., case No. FRI 218.	do	200	Do.
Do	Hoffman Gas Co., Hoffman, Okla., case No. FRI 219.	do	200	Do.

See footnotes at end of table.

ENFORCEMENT ACTIONS, NATURAL GAS PIPELINE SAFETY ACT OF 1968 INITIATED BY OFFICE OF PIPELINE SAFETY—Continued

Date of violation	Identification or case code	Nature of violation	Civil penalty assessed	Disposition of case
Do	Light Stephenson Co., Whitsett, Tex., case No. FRI 235.	do	$200	Do.
Do	Town of Winona, Winona, Tex., case No. FRI 236.	do	200	Do.
Do	Ashford Gas Co., Charleston, W. Va., case No. FRI 239.	do	200	Do.
Do	Orlando, Okla., case No. FRI 223.	do	350	Do.
Do	Johnson Co. Gas Co., Paintsville, Ky., case No. FRI 205.	do	500	Do.
Do	City of Augusta, Ky., case No. FRI 202.	do	500	Do.
Do	Minco Gas Authority, case No. FRI 222.	do	500	Do.
Do	Tuttle Public Works, case No. FRI 224.	do	500	Do.
Feb. 1, 1971	Coalinga, Calif., case No. FRI 105.	Failure to file I. & M. plan	(3)	Notice letter sent.
Feb. 18, 1972	Melville, La., case No. CPF 746.	Multiple violations of system maintenance and record-keeping requirements of pt. 192 of title 49 CFR.	(2)	Do.
Apr. 17, 1972	Sunset Gas, case No. CPF 747.	do	(2)	Do.
Sept. 27, 1973	New Roads, La., case No. CPF 754.	do	(2)	Do.
Nov. 13, 1973	Villa Platte, La., case No. CPF 755.	do	(2)	City of Villa Platte voted $1,500,000 bond issue to replace system.
Nov. 14, 1973	Krotz Springs, La., case No. CPF 755.	do	(2)	Notice letter sent.
Nov. 2, 1973	Delcambre, La., case No. CPF 771.	do	(2)	Do.
Nov. 29, 1973	Port Allen, La., case No. CPF 774.	do	(2)	Do.
Dec. 13, 1973	Kinder, La., case No. CPF 774.	do	(2)	Do.
Dec. 18, 1973	Colfax, La., case No. CPF 775.	do	(2)	Do.
Feb. 15, 1974	RAC Devel. Co., case No. FRI 253.	Failure to file annual report from 1973.	(2)	Do.
Do	Bucks Branch Gas Co., case No. FRI 247, Kentucky.	do	(2)	Do.
Do	Holly Creek Product Corp., case No. FRI 249.	do	(2)	Do.
Do	Alabama-TN National Gas Corp., Alabama, case No. FRI 183.	do	(2)	Do.
Feb. 24, 1974	Forrest Hill, La., case No. CPF 783.	Multiple violations of systems maintenance and record-keeping requirements of pt. 192 of title 49 CFR.	(2)	Do.

[1] Case recommended to DOT Assistant General Counsel for Regulations for transfer to Department of Justice for action to collect civil penalty assessment.
[2] In process.
[3] None.

ALLOCATION OF PERSONNEL WITHIN OPS BY FISCAL YEAR

	1969	1970	1971	1972	1973	1974	1975
Washington functions:							
Office of the Director	5	6	7	6	6	5	5
Regulations	[1] 4	[1] 4	[1] 4	[1] 4	2	2	2
Technology	7	8	8	7	8	8	9
State	3	3	3	3	3	3	2
Industry	1	1	2	2	2	2	2
Operations/compliance				1	2	2	6
Washington total	(20)	(22)	(24)	(23)	(23)	(22)	(26)
Regions:							
Southwest (Houston)		3	3	3	3	3	3
Western (San Francisco)							3
Central (Kansas City)							3
Southern (Atlanta)							3
Eastern (Philadelphia)							3
Region total		(3)	(3)	(3)	(3)	(3)	(15)
OPS total	20	25	27	26	26	25	4

[1] 2 of these positions were assigned to the General Counsel to support OPS.

POSITIONS REQUESTED VERSUS AVAILABLE, BY FISCAL YEAR

	1969	1970	1971	1972	1973	1974	1975	1976
OPS requested	45	50	75	67	66	65	69	60
President's budget	45	25	49	30	32	26	44	48
Congress approved	20	25	27	26	26	25	41	

OFFICE OF PIPELINE SAFETY

[4-year regulatory program plan beginning fiscal year 1976]

Project No.	Short title	Planned completion year			
		1976	1977	1978	1979
5-1L	Revise pts. 192 and 195 reporting requirements	X			
6-1L	Revise pt. 195 re highly volatile liquids (LPG)	X			
7-1GL	Revise pipe bending limitations, gas and liquid	X			
9-1G	Clarify pressure testing under sec. 192.619		X		
12-1G	Establish rulemaking procedures	X			
16-1G	Revise design formula for steel pipe		X		
17-1G	Yield strength of steel pipe		X		
19-1L	Welders under sec. 9, ASME boiler code		X		
49-3G	Revise definition of gas "gathering line"	X			
50-3G	Require overpressure protection for distribution systems		X		
52-3G	Reference industry specification for hi-test wrought welding fitting.			X	
53-3G	Revise corrosion control for short metal pipe	X			
55-3G	Delete unit stress requirements for components in sec. 192.143.			X	
57-61-4L	Make pt. 195 consistent with pt. 192			X	
63-4G	Change annual report by gas distribution operators	X			
64-4G	Change wording in sec. 192.167(b)		X		
68-4G	Reference specification for steel buttwelding steel screw fittings, and pipe nipples.		X		
69-4G	Telemetering of gas pressure information NTSB PAR-74-3.	X			
72-4G	Revise pt. 192 re offshore pipelines	X			
74-4G	"Avonseal" and similar sealing processes in lieu of leak clamps.	X			
75-4L	Disturbing cast iron pipe	X			
76-4	Gas emergency plans	X			
77-4G	Amend pt. 192 to provide for aluminum and aluminum pipe.			X	

OFFICE OF PIPELINE SAFETY—Continued

[4-year regulatory program plan beginning fiscal year 1976]

Project No.	Short title	Planned completion year			
		1976	1977	1978	1979
82-4L	Hydrostatic testing of liquid pipe			X	
84-5G	Using LPG as a test medium		X		
85-5GL	Amend reporting requirements for Mineral Leasing Act purposes.	X			
86-5L	Amend pt. 195 re offshore applicability	X			
87-5G	Establish Federal rules for LNG	X			
88-5G	Update all reference specifications in pts. 192 and 195	X			
89-5	Establish civil penalty procedures	X			
90-5GL	Establish standards for Arctic pipelines			X	
91-5G	Replace referenced specifications with Federal performance regulations.				X
92-5G	Change plastic pipe requirements in secs. 192.121 and 192.123.	X			
94-5	Amend 195.228 re welding		X		

5-Year estimate of technical investigation and applied research proposals,[1] estimated cost

Project	*Thousands*
Fiscal Year 1976 (as presented to Congress)	$500
(*a*) Analysis of failed facilities	150
(*b*) Effects of Arctic environment on pipelines	150
(*c*) Effects of temperature and time on strength of plastic pipe	100
(*d*) Effectiveness of manufacturers quality control	100
Fiscal Year 1977	2,750
(*a*) Analysis of failed facilities	150
(*b*) Evaluate pipeline coating materials	200
(*c*) Characteristics of liquefied natural gas vapor cloud dispersion	300
(*d*) Development of additional training programs for Federal, State, and industry personnel	100
(*e*) Investigation into the areas of offshore pipeline technology:	
1. Safety equipment	300
2. Safety practices and procedures	300
3. Pipe laying techniques	500
4. Inspecting and monitoring	300
5. Offshore natural hazards	300
6. Underwater pipeline repair	300
Fiscal Year 1978	1,200
(*a*) Analysis of failed facilities	150
(*b*) Development of a more effective gas odorant	300
(*c*) Expansion of training program	150
(*d*) Developmnet of tool(s) for inplace evaluation of pipeline condition	300
(*e*) Contingencies for research needs identified by prior years research or investigation	300
Fiscal year 1979	1,200
(*a*) Analysis of failed facilities	150
(*b*) Development of a program of second generation computerized analysis procedures for evaluating technical compliance information (to be continued in fiscal year 1980)	250
(*c*) Study characteristics of underground gas migration	300
(*d*) Expansion of training program	100
(*e*) Contingencies for research needs identified by prior years research or investigation	400

[1] For 1977 and beyond, these are preliminary estimates. Final decisions will be made each year in the process of developing the President's budget.

Fiscal year 1980	850
(a) Analysis of failed facilities	150
(b) Continued development of second generation computerize program for evaluating compliance information	100
(c) Expansion of training program	100
(e) Contingencies for research needs identified by prior years research or investigation	500

OPS CURRENT AND RECENTLY COMPLETED TECHNICAL INVESTIGATION AND APPLIED RESEARCH

Project	Start	Completion	Cost
Analysis and management of a pipeline safety information system	March 1973	November 1974	$73,000
Rapid shutdown of failed pipeline systems and limiting of pressure to prevent pipeline failure due to overpressure.	April 1973	October 1974	149,431
Technology and current practices for transporting, transferring, and storing liquefied natural gas.	March 1973	December 1974	65,151
Design, construction, operation, and maintenance practices of pipeline systems transporting highly volatile, toxic, or corrosive liquids.	April 1974	July 1975	102,342
Odorants and their effectiveness in alerting people to the presence of natural gas.	June 1974	September 1975	81,913
Industry's practices in using plastic materials in gas pipeline facilities and the resulting safety factors.	do	do	85,434
Evaluation of the tools and procedures for assessing the safety of existing gas distribution systems.	do	May 1975	60,634
Current practices, technologies, and problems relating to the overall safety of gas distribution systems.	do	October 1974	30,910
Evaluation of the effectiveness of programs for the prevention of damage to pipelines by outside forces.	August 1975	April 1976	[1] 90,000
Test failed pipeline components	March 1971	Continuing	[2] 105,000
Study of the problems and remedial action available to resolve stress corrosion cracking and corrosion fatigue in gas and liquid pipeline systems.	October 1975	June 1976	[1] 140,000
Study of the problems and remedial action available to resolve hydrogen stress cracking and hydrogen embrittlement on gas and liquid pipeline systems.	do	do	[1] 80,000
Study of safety practices for offshore pipeline facilities	do	August 1976	[1] 190,000

[1] Estimate.
[2] To date.

[The following information was referred to on p. 30:]

DEPUTY SECRETARY OF TRANSPORTATION,
Washington, D.C., November 21, 1975.

Hon. J. GLENN BEALL,
U.S. Senate,
Washington, D.C.

DEAR SENATOR BEALL: In response to your letter of October 29, 1975, transmitting additional questions in connection with the September 25 hearing on gas pipeline safety, I have enclosed answers to each of the questions.

I trust that the answers are responsive to your needs.

Sincerely,

JOHN W. BARNUM.

Enclosures.

Question 1. As you know, my concern over natural gas explosions in residential areas prompted me to author an amendment calling for studies of the growing problem of natural gas explosions. Your annual report for calendar year 1974, recently released, indicates (page 17) that all work is to be completed on such gas distribution safety study contracts by May 1975. It is my understanding that only one study has been completed thus far. Would you tell the Committee the status of each of the various studies and when we can expect them to be completed? And, for the one study completed, what were the recommendations and what action, if any, does DOT contemplate as a result thereof?

Answer. At the time the Annual Report for 1974 was prepared, we anticipated that the four study contracts under special funding which you sponsored would

all be completed by May 1975. The study to evaluate tools and procedures for assessing the safety of gas distribution systems performed by AMF Advanced Systems Laboratory was completed April 1, 1975. It was distributed to appropriate parties and also made available to the general public through the National Technical Information Service (NTIS).

The study of the pipeline industry's practices in using plastic materials in gas pipeline facilities performed by the Toups Corporation was not completed until September 15, 1975, and the study of odorization of gas performed by the Institute of Gas Technology was not completed until October 31, 1975. The delays in completion were primarily due to the time required to obtain approval of questionnaires that were used to provide part of the data for each of these studies. Both studies are being reproduced for distribution to appropriate parties and will also be made available to the general public through the NTIS.

The AMF Advanced Systems Laboratory "Study on Current Practices, Technologies, Problems, and Recommendations Relating to the Overall Safety of Gas Pipeline Distribution Systems" is to be completed by November 28, 1975. This study utilizes, in part, the results of the other three studies. The completion deadline has been extended due to the delays in finalizing the plastic pipe and odorant studies.

The AMF study on tools and procedures, completed April 1, 1975, contains 13 recommendations related, among other areas of gas safety, to an extensive statistical analysis of the Department's leak and accident reporting data, requirements for increased frequency of leak surveys, research work on nondestructive testing of existing piping, and corrosion conditions. Two of the recommendations concern plastic pipe and odorization of gas, which are subjects covered by the other completed studies discussed above. OPSO is actively evaluating these recommendations along with other appropriate data. Decisions for further action will be forthcoming upon completion of its evaluation.

Question 2. The (AMF, Inc.) report recommends an investigation on the impact that increased leak surveys would have. Would you explain the general leak survey practice in both residential and commercial areas? Why is there a distinction made in the inspection of residential versus commercial? Should inspections in residential areas be more frequent?

Answer. Regarding a distribution system, 49 CFR 192.723 requires a gas detector (instrument) survey to be conducted in business districts at intervals not exceeding one year. Out side of principal business areas, including residential areas, a leakage survey must be conducted as frequently as necessary by any effective means of gas detection, but at intervals not exceeding five years. The frequency of inspections of the various systems is based on State regulations and industry standards existing at the time the Federal gas pipeline safety standards were initially adopted.

Since then, our experience indicates that most gas distribution systems are likely to be surveyed with sensive gas detection instruments shortly after being placed in operation and thereafter on a one year to five year cycle, as appropriate. Older systems are likely to be surveyed more often, and some operators will survey their entire system at least annually. The precise survey interval is normally based on an evaluation of the leak history of the particular system and the degree of hazard involved.

The requirement for annual leak surveys of gas distribution piping in business districts is based on the higher potential hazard caused by:

(1) High density of occupancy;

(2) Paved areas that do not allow leaked gas to vent to the atmosphere and that may cause the gas to migrate to spaces where potentially hazardous volumes of explosive gas mixtures may accumulate;

(3) Low likelihood of the existence of vegetation which can serve as an indication of gas leaks; and

(4) Odors in the business areas that may mask the smell of the odorant used in the gas. The requirement that leak surveys be conducted outside principal business areas as frequently as needed but at intervals not exceeding five years is based on the following factors.

(1) The population density is normally low;

(2) Those areas usually have sufficient open space where leaked natural gas can rise to the surface and vent into the air; and

(3) Vegetation exists in those areas which can serve as an indication of gas leaks.

As a result of accident investigations and recent technology development, OPSO is considering a change in the existing requirement for leakage surveys. During

the past few years, new and improved gas detection instruments have become available that greatly increase the speed and accuracy with which leakage surveys may be conducted. Pending final evaluation of recently completed studies, OPSO intends to issue a Notice of Proposed Rule Making on the subject.

Question 3. Along the same lines, what is the inspection frequency requirements in an area like the Whitehall section of Bowie where the explosion occurred and there remains considerable citizen concern?

Answer. The regulations provide that leakage surveys of a distribution system located outside principle business areas, such as the Whitehall section of Bowie, must be made as frequently as necessary, but at intervals not exceeding five years.

You further ask: "What follow-up activity is required in an area where an explosion has occurred? And what are your comments with respect to this constituent's concern?"

Gas pipeline operators are required by Federal regulation to establish and carry out procedures for analyzing accidents and failures to determine the causes and to minimize the possibility of recurrence. The constituent is concerned about the short-term inadequacies which may remain in the Whitehall system. In the opinion of the Maryland Public Service Commission, which has enforcement responsibility for the system, the operator of the system is making a reasonable effort to provide a safe system and is complying with the requirement of the Federal standards.

Question 4(a). Would you describe the training efforts by DOT in view of your remarks in your study entitled *Federal-State Relations in Gas Pipeline Safety* "that a growing need exists for specialized training of industry personnel so they can improve State and local gas pipeline safety programs."

As you may know, S. 2042, which I recently introduced, contemplates additional resources for training and also provides more flexible training authority for DOT. Do you believe this is desirable?

Answer. In conjunction with State agencies, OPSO trains industry personnel through 2-day industry seminars. All requests for cosponsoring 2-day industry seminars for FY–75 and 76 have been met. Also, one additional instructor will be added to the training staff during FY–76. We believe that neither additional training resources nor authority is required at this time. In our opinion, the training that OPSO is currently conducting meets with the spirit and intent of the training provisions in your bill, S. 202.

Question 4(b). Also, what is your practice with respect to the training of private industry personnel? Is this done? Who foots the bill? What is the average cost per enrollee? Do you have evidence or evaluations showing that such training efforts have made a difference in either safety or in a state's performance?

Answer. OPSO jointly conducts 2-day industry training seminars in cooperation with the State agencies. On November 11–12, 1975, the 61st seminar was held in Colorado. During the past 3 years, OPSO has provided training for approximately 3,000 industry personnel.

Since small gas operators have difficulty in understanding and complying with the regulations because of inadequate staffs, OPSO strongly encourages these operators to attend the 2-day industry seminars. Courses are directed to the inspection and evaluation of pipeline facilities, the investigation of pipeline failures, and orientation of small operators as to program requirements. New courses are being developed, and we plan to expand this program to meet more effectively the needs of the industry.

Those participating in the industry seminars pay all their travel, lodging, and other related expenses. Average estimated training cost to the Federal government is $40 for each student attending the 2-day industry seminar.

We feel this training has significantly upgraded the safety expertise of State and industry personnel. Since the industry training program has only been available for 3 years, we feel it is too soon to spot any definite safety trend relative to a state's program performance.

Question 5(a). How is it that in so many cases company personnel were on the scene in adequate time to prevent an explosion but the proper steps were not taken?

Answer. We believe the most likely reason is that some operators do not have adequate plans to be followed in response to an emergency or that operators with adequate plans do not implement them well on the scene. To prevent the recurrence of such situations, we are in the process of revising Section 192.615 of the gas pipeline safety standards to give operators more specific guidance

65–072—76——4

as to what is necesasry for an adequate emergency plan. A notice of Proposed Rule Making (Notice No. 75–1, Docket No. OPS–32) to revise Section 192.615 was issued on March 20, 1975. There were thirty-five (35) comments received from the public on the revision. The proposed rule will be brought before the Technical Pipeline Safety Standards Committee on November 19 and 20, 1975. Final action will be taken on the Notice after that meeting.

The proposed revision provides that a gas operator must have a complete written emergency plan, train personnel on the contents of the plan, and set forth procedures to carry out the provisions of the plan when an emergency occurs. The plan provides sufficient flexibility to allow the operator freedom to develop a plan that is best suited to its particular operation.

Question 5(a) Part II. What is your reaction to the Jennings' suggestion and his of your proposed regulations (concerning the revision to Section 192.615)?

Answer. We believe that Mr. Jennings' suggestions relating to the scope of employee actions are sufficiently covered by the Notice of Proposed Rule Making, 49 CFR 192.615, (Notice 75–1, Docket No. OPS–32). Mr. Jennings is correct that "emergency" is not defined in the proposed revision to Section 192.615. However, we believe that defining the term might unnecessarily constain the scope of the regulation and thereby reduce its effectiveness.

Question 5(b). With respect to damage to pipelines resulting from excavation damages, this is a leading cause of significant or major leaks. Recent experience with utility coordinating councils demonstrate that such damage can be averted or greatly reduced. S. 2042, would require the formation of statewide utility coordinating councils whose responsibility would be to encourage and promote: (1) local utility coordinating councils in areas of the state where excavation damages represent a significant problem, and (2) damage prevention programs established either through the cooperation and initiative of the private sector, or if necessary, by state and local legislation.

Further, it has been suggested that such councils also serve smaller companies by providing a formula for the exchange of information and technical talk that otherwise might not occur.

Since such utility councils make sense not only to the operator but also to the excavator and are in the public interest, what is the delay in implementing such a mechanism that has demonstrated its effectiveness in preventing damage to pipelines?

Answer. The Department does not believe that it has been delaying the establishment of utility coordinating councils. On the contrary, it has actually acted in many ways to encourage and foster their growth and effectiveness. For the past three years, the Department has encouraged the adoption of State legislation with the purpose of preventing damage to buried pipelines and utilities from outside forces.

A Model Statute was first drafted and circulated in January 1972 to State and local government bodies, the industry, and all concerned groups known to the Office of Pipeline Safety. Comments received in response to that proposed statute were provided to the National Transportation Safety Board for use in its special study report on pipeline damage prevention. In November 1974, the Secretary sent to the Governors of all of the States a revised model statute designed to protect more effectively underground pipelines and utilities from excavation damage which he urged that they consider and support for adoption at the State and local level. A major feature of that model statute is to provide State and local coordinating councils strong support under State laws. In fact, the Michigan and Maryland statutes, which are examples of such State laws that foster and encourage utility location and coordinating councils, were enacted subsequent to the Department's initial Model Statute proposal.

The Department has participated in several State and industry programs devoted to the support and strengthening of utility location and coordinating council activity. Also, it has disseminated information widely about the American Public Works Association workshops on this topic in its monthly bulletin on pipeline safety and fostered the APWA efforts in many of its safety training programs for States and industry. The Department is initiating a contract study to determine the effectiveness of pipeline damage prevention programs regarding outside force damages. The results of that study may well further encourage and improve utility and pipeline location-coordination programs nationwide.

The Department does not advocate a mandatory excavation damage prevention program as a condition to State certification because those States which do not currently have statutory authority to meet such a requirement would not qualify for certification. The burden of enforcing the Federal gas pipeline safety

standards in those States would thus fall on the Federal government. However, after we have the results of the contract study, we may be able to recommend alternative methods of encouraging State agencies to foster Statewide coordinating councils.

Question 6(a). Again, in your *Federal-State Relations in Gas Pipeline Safety*, you pointed out that at least 16 States do not yet have an employee working full-time on this program. Has this situation changed since the issuance of that report?

Answer. Yes, we are pleased to report that largely through the efforts of OPSO, three additional States now have a full-time employee assigned to the pipeline safety program.

Many of the State agencies have been placed under a "hiring freeze" as a result of the recent economic recession. Consequently, the total number of full-time State employees working in gas pipeline safety is not expected to increase during 1975. Some States have indicated, however, that in 1976, the "hiring freeze" will be eased, thereby creating an opportunity to add to their gas pipeline safety staffs next year. OPSO will have new data regarding the number of State agency employees working in gas pipeline safety early in 1976 following the submission of annual certification and agreement forms.

Question 6(b) Part I. Further, a Prince George's County task force which investigated the Bowie explosion pointed out that both the Office of Pipeline Safety and the Maryland Public Service Commission have minimum personnel in the field and that little or no on-site inspection was carried out in Maryland to verify compliance with regulations. Maryland has only one pipeline safety inspector for the entire state and Maryland appears to be a representative state in this regard. Is pipeline safety which actually involves life and death, important enough to have at least one full-time employee and at least one full-time inspector?

Answer. Although we feel that in most States at least one full-time person should be assigned to gas pipeline safety, there are some States with only a few operators and a relatively small number of gas customers, e.g., Delaware and New Hampshire, which do not require the full-time services of a gas pipeline safety inspector. Also, several States that do not have at least one full-time inspector have, nevertheless, maintained an acceptable safety record. We have frequently advised the Maryland Public Service Commission that more than one inspector is needed for a thorough program in Maryland. Still, Maryland has failed to take full advantage of the Federal grant program by enlarging its staff.

Question 6(b) Part II. Can the Federal Government rely on States to enforce Federal safety standards unless the minimum personnel are available?

Answer. Our past evaluations of State activities indicate that most States can be relied on to conduct an effective compliance program with respect to the Federal standards. However, it is not clear that in those States that are believed to have less than a thorough program the blame rests solely on lack of personnel. To enable a more precise assessment of the effectiveness of State programs, OPSO is developing a standard method of quantitatively evaluating each State agency. When the results of a particular evaluation are compared with a normal value for effectiveness, OPSO will be able to determine those factors causing a State agency to be more or less than effective. The number of personnel is only one factor which weighs in that determination.

Question 6(c). S. 2042 provides for 100% Federal finacing of at least one safety engineer and between one and three full-time inspectors, depending on the miles of pipeline in a State and the needs of that State. What is your reaction to this provision?

Answer. We are concerned about the merits of funding more than a maximum of 50% of the cost of State personnel. The purpose of the existing limit on funding is to encourage State agencies to expand and improve existing programs rather than provide a new source of funds. If 100% funding were adopted, the effect could be more Federal spending without the desired improvement in the quality of State programs because in the absence of a requirement that a State agency maintain its current level of spending, S. 2042 would not ensure that the funding would be used to add to a State's existing program. Additionally, 100% funding would not be in keeping with the purpose of the Act to foster a Federal and State cooperative effort.

Question 7(a). What is your evaluation of the effectiveness of existing operator efforts (regarding customer education) and to this suggestion in S. 2042 that such educational efforts be part of the operators required plans?

Answer. We have not conducted a formal evaluation of operators' customer education plans, but based on OPSO monitoring activities and NTSB's investigations, we feel that some operators do not have an effective program of advising customers about the potential dangers of natural gas, the detecting of leaks, and the steps to take if a leak is detected. For this reason, OPSO issued a Notice of Proposed Rule Making (Notice No. 75–1; Docket No. OPS–32) on March 20, 1975, to amend the requirements in Section 192.615, Emergency plans, to clarify and delineate the present requirement. The proposed revision lists segments of the general public, in addition to customers, toward whom the educational programs should be addressed. In addition, the revision would require the program to be as comprehensive as necessary to reach all areas in which an operator transports gas.

This plan would be required to be developed by each operator. However, we oppose the requirement in S. 2042 that emergency plans and plans for the education of customers regarding gas odors be filed with OPSO. Such plans would be available to OPSO personnel at the operators office where a review and evaluation of that plan could more appropriately be conducted.

Question 7(b). Also, as you may recall in my May 21, 1974 floor statement I urged DOT to amend 49 CFR 1625, which involves the odorization of gas so as to make the odor detectable at a lower explosive level and to require that this amount be increased further by at least twice the new recommended rate during each heating season for a reasonable period as a leak test program. Why has this not been implemented?

Answer. Section 192.625 requires that the intensity of the odor of combustible gases must be such as to be readily detectable at concentrations of one fifth of the lower explosive limit. Based on the results of studies on the effect of odorization, it is OPSO's opinion that increasing the concentration of odorant may not result in improved safety and may be detrimental to safety. These studies show that due to the combustion characteristics of the mercaptan odorants and the limitation of the sense of smell, olfactory fatigue may offset the anticipated safety benefits of making the gas detectable at a lower concentration in air. Olfactory fatigue, or reduced sensitivity to odor, can result when the odorant level in gas is increased above the recommended level. At the higher level, traces of gas that are released due to ignition lag in a normally functioning gas burning appliance can introduce slight traces of odorant into a home. As a result, people who are exposed to this low level of odorant over an extended period may develop less sensitivity to the odor than they otherwise would have. The American Gas Association has research now underway that is expected to further address this subject.

The OPSO does not believe that increasing the odorization rate to approximately twice the normal rate for short periods as a leak test program would be beneficial. With a higher concentration of odor intensity, such things as ignition lag or incomplete combustion on a gas burner could cause a readily detectable odor that a customer may report as a gas leak. After learning that the odor is a result of increased odorant level due to a test, the next time the customer smells such an odor he may conclude that another test is being conducted and not react to the odor. This result could cause more explositions rather than less.

Question 8(a). How many states have assumed responsibility for a gas pipeline safety program either under 5(a) of the Act and how many have entered agreements under 5(b) where under a state only agrees to adopt certain aspects of a gas pipeline safety program?

Answer. A total of 45 State agencies have 5(a) certifications and seven State agencies have 5(b) agreements. In Florida, two agencies have 5(a) certifications: The Florida Fire Marshal's Office, which has jurisdiction over liquid petroleum gas operators; and the Florida Public Service Commission, which has jurisdiction over natural gas operators.

Question 8(b). In the State or States not having entered an agreement under either 5(a) or 5(b), how many Federal inspectors are utilized to adequately carry out the enforcement in such states?

Answer. New Jersey is the only State not participating with OPSO in the Federal gas pipeline safety program. The OPSO Eastern Regional Office conducts Federal compliance activities in New Jersey. That Office has two inspectors who monitor the gas operators in New Jersey in addition to their duties regarding the 12 other states and Washington, D.C. in the Eastern Region.

Question 9(a). On page 14 of your most recent annual report I am disturbed to say that Maryland received $9,115. In view of the number of explosions that his Maryland in recent years, how do you explain the difference in the amount say Maryland receives and that of another State, say Alabama?

Answer. Upon application by a participating State agency, and within the limits of appropriated funds, the Department reimburses a State agency for up to 50 percent of its reasonably required program costs.

Although encouraged to do so, Maryland has not elected to take maximum advantage of this Federal grant program. It has consistently requested less than the maximum amount of Federal funds available. Alabama, however, has a larger program than Maryland and a much greater expenditure on gas pipeline safety.

Question 9(b). Would you provide for the record a chart showing the total amount spent in each State on pipeline safety and the amount and percentage of total represented by Federal funds? Also, indicate how much additional Federal funds would be required to bring each State's Federal contribution to 50 percent.

Answer. The information for the last full year of the program, 1974, is attached as Appendix II.

CALENDAR YEAR 1974

State	Total gas PL safety expenses	Federal reimbursement	Percent of total represented by Federal Funds	Additional Federal funds needed to provide 50 percent funding
Alabama	$133,109.00	$58,100.00	43	$8,455.00
Alaska	20,426.65	10,213.32	50	0
Arizona	28,746.56	14,373.28	50	0
Arkansas	39,723.30	24,861.64	50	0
California	80,486.05	40,243.03	50	0
Colorado	48,097.54	24,048.77	50	0
Connecticut	20,575.00	10,287.00	50	0
Delaware [1]	5,000.00	0	0	0
Florida [1]	165,000.00	0	0	0
Georgia	108,324.80	54,162.40	50	0
Hawaii	9,570.00	4,875.00	50	0
Idaho	32,214.00	10,107.00	50	0
Illinois	80,543.86	40,271.93	50	0
Indiana	79,558.90	36,627.00	46	3,153.00
Iowa	24,286.52	12,143.26	50	0
Kansas	48,914.52	24,457.26	50	0
Kentucky	74,977.64	37,488.82	50	0
Louisiana [1]	126,456.00	0	0	0
Maine	33,188.00	16,594.31	50	0
Maryland	10,493.09	5,246.55	50	0
Massachusetts [1]	19,500.00	0	0	0
Michigan	142,026.00	66,860.00	47	4,153.00
Minnesota	49,425.00	24,712.00	50	0
Mississippi	80,788.60	40,394.30	50	0
Missouri [1]	69,503.03	0	0	0
Montana	26,288.92	13,144.46	50	0
Nebraska	50,824.85	25,412.42	50	0
Nevada	25,362.00	12,681.00	50	0
New Hampshire	20,520.49	10,260.25	50	0
New Jersey [2]	0	0	0	0
New Mexico [1]	80,000.00	0	0	0
New York	604,963.00	170,212.99	28	132,268.51
North Carolina	50,586.00	25,293.00	50	0
North Dakota	4,000.00	0	0	0
Ohio	72,621.90	36,310.95	50	0
Oklahoma [1]	34,301.00	0	0	0
Oregon	33,845.30	16,922.65	50	0
Pennsylvania	101,667.81	50,833.90	50	0
Rhode Island	42,978.00	21,489.00	50	0
South Carolina [1]	85,000.00	0	0	0
South Dakota	9,179.29	4,589.64	50	0
Tennessee	122,823.58	55,858.00	45	5,553.00
Texas [1]	55,418.00	0	0	0
Utah	23,282.52	11,225.00	48	416.00
Vermont	31,697.00	11,940.00	37	3,900.00
Virginia [1]	38,000.00	0	0	0
Washington	29,091.46	10,465.00	35	4,080.00
West Virginia	98,396.80	48,050.00	49	148.00
Wisconsin	72,281.59	35,754.00	49	387.00
Wyoming	52,806.00	26,403.00	50	0
District of Columbia [1]	1,500.00	0	0	0
Puerto Rico [1]	24,040.00	0	0	0

[1] Did not request Federal funding.
[2] Does not participate in OPSO program.

Question 10. I am not certain that the technical committee has been as effective or as useful as it should be. I am disturbed to note that such Committee did not

hold a single meeting in 1973 and that since 1972 indeed, the Committee has only met twice. It is my position that the Committee should be a functioning, effective entity or be abolished.

Section 3 of S. 2042 would require the Technical Pipeline Safety Standards Committee to meet at least twice a year. At one meeting the Committee would be required to consider the recommendations and reports of the NTSB and the Secretary's response thereto. A week prior to the meeting at which the NTSB report will be considered, the Secretary is required to prepare for the members of the Committee a summary of the NTSB recommendations and the Department's response thereto. This is designed to both upgrade the Committee and to also assure that the NTSB recommendations and Department's response thereto, are examined by the Technical Committee.

Answer. We believe that the Committee is a functioning and effective entity. The Committee's regulatory experience and engineering expertise provide a valuable source of advice to the Department during the process of developing and adopting gas pipeline safety standards. The Committee's advice has been beneficial with respect to the originally issued Federal gas pipeline safety standards (49 CFR Part 192, Aug. 1970) and also the 22 amendments issued since then, significant among which are standards for corrosion control (June 1971), LNG facilities (Oct. 1972), marking pipelines (Mar. 1975) and odorization of gas in transmission lines (May 1975). In addition, when objective information about problems in operating a gas system is needed, no more appropriate source exists than Committee members with current operating experience.

The frequency of recent Committee meetings has been sufficient for the Committee's review of rule making proposals submitted for its consideration. We anticipate that more frequent meetings will be held in the future to match the demands for our gas pipeline safety program. The next Committee meeting is scheduled for November 1975, and another is tentatively set for early 1976 to discuss offshore gas pipeline safety problems. We believe that a statutorily fixed schedule or number of meetings would not readily match the Department's standards development and rule making process. Meetings are now scheduled when material is available for the Committee's attention. Further, we do not believe that requiring the Committee to consider all NTSB recommendations and the Department's responses thereto in the manner you propose would be beneficial.

Under Section 307 of the Independent Safety Board Act of 1974 (49 U.S.C. 1901 et seq.), the Department, must within 90 days after receiving an NTSB recommendation, formally respond by either stating the action to be taken in implementing the recommendation or stating the reasons for rejecting the recommendation. The NTSB is required to make each response available to the public. We expect that if your proposed amendment were adopted, the Committee's report on NTSB recommendations would come too late for advice in responding within the 90 day period.

It should be noted that as part of its existing duties, the Committee now considers each NTSB recommendation that forms a basis for a safety standard proposed by the Department.

Question 11. Finally, there seems to be broad agreement at least if the hearings held by the McDonald Subcommittee on Communications and Power in 1974, are any indication that more resources are needed. In view of this, what is your reaction to the authorization levels provided in S. 2042?

Answer. We agree that more resources for the Federal gas pipeline safety program are needed. While not the same level as proposed by S. 2042, the Department believes that the appropriations which would be authorized by S. 2183, representing a substantial increase above previous years' appropriations, would be adequate for an effective and orderly development of the pipeline safety program.

Question 12. In distribution mains the leak rate for systems installed in the 1970's is significantly higher than the previous two decades. Why?

Answer. In the analysis of leak rates based on age of pipeline, the report suggests why the 1970's decade pipe has a higher leak rate than might be expected: "This might be explained by the fact that new systems require time 'to get the bugs out,' i.e., to detect and repair problems created in construction."

Also, changing circumstances in gas distribution and other factors characteristic of industry provide reasons for expecting a higher leakage rate for pipe installed in the 1970's than for the previous two decades, as discussed below:

(1) Natural gas distribution experienced its greatest expansion during the decades beginning in 1950 and 1960. Main extensions and distribution networks

were constructed in many new areas to meet customer demand. Leaks due to causes arising from construction were most likely discovered and repaired within the decade of construction. In the current decade, on the other hand, it is likely that relatively little construction is being carried out in those areas and, therefore, there are fewer opportunities for outside force damage.

(2) In the 1970 decade, a large proportion of the construction on distribution systems consists of replacing or relocating mains. This work is normally done in conjunction with construction activities by outside parties which may involve sewers and water mains, bridges and highways, and underground installation of electric and telephone utilities, thus increasing the opportunity for outside force damage.

Question 13. Again the report observes that outside force damage is responsible for about 70% of the leaks in distribution and 54% in transmission systems. It goes on to note a similar disturbing phenomenon as I just noted namely while the leak rate from third party damage increases with age, "for pipes installed in the 1970's the third party damage leak rate shows a sudden increase." This coincidence of more leaks and more outside force damage for pipes installed in the '70's, suggest something may be wrong. What, if anything, is being done to reverse these statistics?

Answer. In the discussion by the study contractor of the tabulated data which you cite, it was stated that "There are several possible explanations for this sudden increase in leak rate in the 1970's. It may be that recently installed mains tend to be in new construction areas and densely populated areas, and are more likely, therefore, to be damaged by outside force. Another explanation might be that recently installed mains are more often made of plastic material which appears to be more susceptible to damage by outside force. The higher leak rates for the 1920's, '30's, and '40's might be explained by the fact that the older the line, the more likely it is to be poorly marked and/or unmapped."

Regarding the increased leak rate in the '70's, in addition to the Department's activities directed toward establishment of State coordinating councils, the OPSO has issued additional gas pipeline marking regulations and conducted a study of industry practices in using plastic materials in gas pipeline facilities. All of these activities are directed toward prevention of damage to buried pipelines.

Question 14. In their recommendations, the University of Oklahoma recommends that all pipeline operators be required to file an individual failure report. Present law excludes distribution operators with less than 100,000 services from the individual failure report, but they are required to file annual reports. This omission, in the words of the Oklahoma report "seriously limits the usefulness of the data system." Do you support this recommendation?

Answer. When the requirement to file an individual failure report was adopted, distribution companies with less than 100,000 customers were exempted to ease the reporting burden on those companies that are least able to bear it. Because companies with over 100,000 customers serve more than 85 percent of the gas customers in the Nation, detailed information from these companies provides an adequate basis for identifying safety problems, determining causes, and assigning priorities in formulating regulations. In this respect, the usefulness of the data system is not limited.

The University of Oklahoma recommendation primarily relates to the use of the information gathering system to assess the performance of an individual company which has less than 100,000 customers. We believe that with the advent of a fully staffed field compliance program just last July, it is premature to determine whether the imposition of an additional reporting requirement on operators with less than 100,000 customers is needed to aid OPSO in assessing their performance.

Question 14(b). In the preamble to regulation 191, you indicate the information is a statistical sample, but in your annual report you do not indicate that the data is only a sample and not a thorough compilation as required by Section 14. Isn't this misleading?

Answer. We do not think it is misleading. The information obtained under Part 191 that is from a statistical sample concerns details of accidents occurring on pipelines operated by distribution companies with more than 100,000 customers. Based on the reporting criteria in Part 191, the Department requires telephonic reports of all accidents and casualties occurring on pipelines subject to the Natural Gas Pipeline Safety Act of 1968. Using this information, the Department prepares a complete and accurate annual report of accidents and

casualties in accordance with Section 14(a)(1) of the Act, including those accidents and casualties of distribution companies with 100,000 or less customers.

Question 14(c). While I am on the subject of annual reports, such reports also give an estimate of annual damage. As a layman, I would construe this as meaning all damage. Yet, it is my understanding that as used in the annual report this only includes the operators damage. Thus, if you had a $200 damage to the operator's pipe, that would be included but if the same incident also caused $200,000 damage to an apartment, the latter would not be included. I find this puzzling, particularly when it is my understanding that each operator submits, in the operator's annual report, the total damage, which includes any damage claim settled for a given year on non-operator's property as well as damage to the operator's property.

Since I am advised that this total damage may run seven to eight times the operator's damage, what is the justification for not reporting the total damage since the information is readily available?

Answer. The estimated property damage, which was reported to Congress only for the years 1970 through 1972, was based upon operators' estimates of damage to their facilities and the sum of the claims for damage made in prior years but which were settled during the reporting year. Since these property damage figures do not reflect the actual property damage totals for the reporting year, they are considered misleading. Therefore, similar data has not been included in the annual reports since 1972.

Question 15. In the analyses (pages 2–118) of 32 operators, the University of Oklahoma identified 12 as "potentially unsafe" in any one of three years examined (number of deaths and injuries for operators ranged from 0 to 23). This was determined by looking at actual as contrasted with expected leaks. The report states "This result tends to indicate that it is possible to use this approach to identify operators who should be the target of OPS enforcement efforts."

What is your reaction to this recommendation? Do we have any idea as to the number of inspections during this timeframe that these "potentially unsafe" operators received?

Answer. With the increase in the field offices during 1975 from one to five, the OPSO plans to consider leak history in targeting operators for compliance evaluations.

The number of inspections which each "potentially unsafe" operator identified in the Oklahoma report received are as follows:

NUMBER OF INSPECTIONS[1] BY STATE AGENCIES OF OPERATORS IDENTIFIED IN OKLAHOMA UNIVERSITY REPORT

Operator I/D	States of operation	Number of State inspections		
		1971	1972	1973
180	Alabama	10	12	15
594	Arizona	4	7	4
1640	Massachusetts	(2)	(2)	(2)
1800	New York (estimated)	381	444	584
2704	do	318	370	487
11680	Oklahoma	9	147	43
	Texas			
12408	Michigan	128	108	57
13780	Minnesota	1	1	2
	North Dakota	2	2	2
18532	Arizona	3	6	4
	New Mexico	35	39	84
	Oklahoma	7	7	7
	Texas	(3)	(3)	(3)
18536	Arizona	2	2	4
	California	0	3	2
	Nevada	0	0	37
21350	Virginia (estimated)	10	10	4
22182	Washington, D.C. (estimated)	5	5	2
	Maryland	4	5	2
	Virginia (estimated)	10	10	4

[1] As defined by individual States prior to issuance of OPSO reporting guidelines.
[2] State records not available.
[3] Information to be supplied when received from the Texas Railroad Commission.

Question 16. Would you provide for the record the total number of operators for the last three years that have been subject to the Act's penalties and indicate the total penalty levied?

Answer. During the years 1972, 1973, and 1974, the OPSO assessed 42 operators a total of $91,795 under the Act's civil penalty provisions.

Senator HARTKE. The next witness will be Hon. John H. Reed, Chairman of the NTSB, along with Mr. Henry Wakeland, Director, Bureau of Surface Transportation, and Henry Shepherd, Acting Chief, Pipeline Safety Division, and there is evidently somebody else.

How are you, John?

STATEMENT OF JOHN H. REED, CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD; ACCOMPANIED BY HENRY H. WAKELAND, DIRECTOR, BUREAU OF SURFACE TRANSPORTATION SAFETY; BARRY M. SWEEDLER, DEPUTY DIRECTOR, BUREAU OF SURFACE TRANSPORTATION SAFETY; HENRY M. SHEPHERD, ACTING CHIEF, PIPELINE SAFETY DIVISION; AND FRITZ L. PULS, GENERAL COUNSEL

Mr. REED. Very fine. You have identified the gentlemen. On my far left, Mr. Shepherd; on my left, Mr. Wakeland, and on my right, Mr. Sweedler. We have our counsel, Mr. Puls, and Isabel Burgess present, also.

Mr. Chairman, and members of the subcommittee, the NTSB appreciates the opportunity to appear before you today to discuss pipeline safety.

It has been suggested that we discuss natural gas and liquid pipeline safety, both of which are under the jurisdiction of this subcommittee.

The Safety Board seeks to stimulate and encourage implementation of the necessary pipeline safety programs by identifying major safety problems through our accident investigations, special studies based on these investigations, and safety recommendations. The Board's work has had a major influence on pipeline safety activities both in the public and private sector. These results have been accomplished with a staff of only two pipeline specialists.

Since 1969, the Board has investigated many areas of pipeline safety. We have issued 20 pipeline accident reports, 3 special studies, conducted 4 public hearings, 1 national symposium, and sent investigators to the scene of dozens of accidents throughout the country. As a result of these activities, we have issued more than 200 pipeline safety recommendations.

When compared with other modes of transportation, the number of fatalities from natural gas pipeline accidents remains low. A review of gas pipeline fatalities reported from calendar year 1968 to 1973 showed an increase from 16 to 59. This contrasts with a decrease in fatalities to 24 in 1974. In the first 8½ months of 1975, there have been only four fatalities from gas pipeline accidents jurisdictional to the Department of Transportation, and five from liquid petroleum pipeline accidents.

In addition to the above statistics, we are investigating two accidents on gas gathering pipelines in rural areas which claimed a total of nine lives. These lines are not covered by the regulations of the Office of Pipeline Safety Operations because of their exemption from the Natural Gas Pipeline Safety Act of 1968; however, DOT now interprets

the new Hazardous Materials Transportation Act of 1974 to permit OPSO to promulgate regulations to include rural gathering lines.

Additionally, an offshore gas gathering line accident at Houma, La., on September 12, 1975, was considered nonjurisdicitional by OPSO but is being investigated by the Safety Board.

To view this improvement as a trend, however, would be unduly optimistic. Swings in losses do occur for random reasons, even when the background of safety controls is unchanged. For example, in commercial aviation there may be comparatively few fatalities in one year and several hundred in another year. The underlying hazards in pipeline accidents, as shown in leak and failure reports, have not declined. The number of major leaks and failures which cause the fatalities continues to increase, reaching 1,477 in 1974 as opposed to 1,285 in 1971, the first full reporting year.

The possibility of a large scale catastrophe is always a continuing concern in pipelines which carry flammable or potentially explosive materials. If several recent accidents had occurred only a few miles one way or another on the route of the pipeline, or at different times, major catastrophes could have been the result. The potential for large-scale losses in this field is similar to that for railroad derailments involving hazardous materials. Furthermore, gas and liquid pipeline accidents can involve persons who, as bystanders, are unable to take precautions for their own safety, and are often completely unaware of any hazard.

The Safety Board is the only Federal agency investigating pipeline accidents for the purpose of reporting the facts and circumstances, determining the probable cause, and making recommendations to prevent recurrence. Our recommendations are directed to the Office of Pipeline Safety Operations (OPSO), other Government agencies, the industry in general, specific pipeline operators, trade associations, State agencies, the American Society of Mechanical Engineers Gas Piping Standards Committee, and a number of others. Most of these recommendations have been implemented either in whole or in part.

I would like to discuss briefly a few current pipeline safety problems and indicate our approach to finding the solutions. The largest single cause of pipeline accidents is excavation damage. In the past few years, it has caused more than 40 percent of all gas pipeline accidents and 30 percent of liquid pipeline accidents.

In 1972, the Board conducted a national symposium in Washington on the prevention of damage to pipelines. We heard gas distribution, transmission and liquid operators, representatives of pipeline associations, equipment manufacturers, labor unions, contractors, telephone and electric companies, water and public works groups, and right-of-way people, in addition to State and Federal Government officials. I believe we learned a great deal about excavation damage and also about some possible solutions.

In 1973, the Board issued a special study entitled, "The Prevention of Damage to Pipelines." The primary purpose of that study was to encourage the establishment of regional and local utility coordinating committees and one-telephone-number notification centers. We believe that the problem could be solved if voluntary cooperative programs were set up that would encourage excavators to make it easy and convenient for them to notify the concerned parties of proposed work.

Since that time, the American Public Works Association has organized the Board-recommended National Utility Location and Coordination Council. They have done a tremendous job by accepting national leadership in this area and by helping in the organization of local and regional damage prevention programs. In fact, the March 1975 issue of their magazine was devoted to damage prevention.

Formation of these local committees, which include one-call notification systems, is the first step in preventing damage to pipelines and all other underground facilities. The National Utility Contractors Association, whose members do much of the excavation, has endorsed the Board's study and is working toward the implementation of the Board's recommendations. The International Union of Operating Engineers has agreed to help teach damage prevention to the men who operate the excavation machines. I am sure that as these one-call systems become effective throughout the country, the number of excavation-type accidents will be reduced significantly.

Unfortunately, some of the accidents we looked at indicate that gas company personnel failed to take the proper action in emergency situations. In at least 5 of the 20 accidents reported, we found that company personnel were on the scene in response to reported gas leaks, for varying periods of time before the explosion occurred. In none of these cases was the flow of gas turned off. And in four of the accidents, nearby buildings were not checked for the presence of gas before the explosions. Company emergency personnel were on the scene in these cases from 10 to 90 minutes before the explosion. As a result of these accidents, 19 persons died. The accidents occurred at North Richland Hills, Tex., Annandale, Va., Atlanta, Ga., Lake City, Minn., and Clinton, Mo.

We suggested that pipeline operators take a hard look at their current methods of training personnel for emergency situations, the available written procedures and the preplanning done to cope with emergencies. Many of the problems can be traced to the training process or lack thereof. Some operators involved in these accidents had comprehensive, well-thought-out procedures, but their employees were not aware or familiar with them. In other cases, procedures simply were not available. Granted, every emergency situation is different, but workmen need and must be given proper guidance. Preplanned shutdowns should be prepared. The quickest way of shutting down a failed pipeline should not have to be figured out by reviewing maps and records while an emergency is underway.

The Safety Board, in its report of the Charleston, W. Va., explosion and fire of December 2, 1973, noted that none of the victims reported previously detected gas odors to the gas company or to the fire department. This was partially the result of the fact that the gas company's educational program submerged warnings and instruction within promotional material and therefore did not adequately inform the customers of the possible consequences of failure to report a gas odor to the gas company or the need to leave the premises.

In this accident, as well as the El Paso, Tex., fire and explosion of April 22, 1973, in which the victims failed to notify anyone of gas odors detected previously, the Safety Board recommended that OPS amend the Federal regulations to require pipeline operators' public education programs to provide warning against the full range of

hazards of natural gas, what to do, and why action is necessary, and that educational programs intended to enable customers and the general public to recognize and report gas emergencies be printed not only in English but also in other languages spoken or understood in that particular community.

The Office of Pipeline Safety recently issued a notice of proposed rulemaking on strengthening the requirements for emergency plans and customer hazard awareness. This NPRM is designed to extensively revise, clarify, and delineate the regulations and cites 16 of the Board's recommendations.

The Safety Board, in its investigations of natural gas pipeline accidents at Bowie, Md., on June 23, 1974, Charleston, W. Va., as I mentioned, on December 2, 1973, and others, unearthed a twofold problem with natural gas odorants. The first problem was that olfactory fatigue develops rapidly after several whiffs of the odorant have been taken; the odorant is no longer readily detectable by scent, and therefore the cause for alarm appears to have been eliminated. The second problem was the fading of the odorant as it leaked through and was filtered out by the soils at the accident site. As a result of these discoveries, the Safety Board made a recommendation to the American Gas Association (AGA) to give a high priority to the problem of soil absorption of odorant compound in its planned research to develop an improved odorant. As a direct result of that recommendation, the AGA has authorized the expenditure of $170,000 for the first year of a 3-year study of the problem of gas odorization. A first step, but a large one, has been made by the natural gas pipeline industry.

We believe that it is practical to identify existing hazards in a pipeline system before accidents occur, by utilizing the techniques of system safety. The Safety Board recommended that the American Society of Mechanical Engineers, in cooperation with the American Gas Association, develop guidelines for the use of systems analysis by gas distribution and gas transmission pipeline operators. Both groups have been working in this area, and in early 1975, the AGA published a "Guide to System Analysis in the Gas Industry."

In general, the pipeline industry, voluntary associations, and technical societies have been cooperative and effective in complying with the Safety Board's recommendations. There are several reasons for this. The pipeline industry and the technical societies have both the experience and the expertise to carry out the recommendations, and can do so in a timely manner.

Other Safety Board recommendations go directly to OPSO to add to or amend the pipeline regulations. Two such recommendations were: (*a*) More stringent regulations for the transportation by pipeline of liquid petroleum gas than for less hazardous petroleum products; and (*b*) develop standards for the rapid shutdown of failed natural gas and liquid pipelines.

The first recommendation was issued on June 12, 1972, and OPSO has a study near completion on the subject, but no notice of proposed rulemaking or amendments to the regulations are in effect at this time, more than 3 years from the release date. The second was issued on February 12, 1971, and OPS contracted for a study on the subject and is now reviewing the completed study; no notice of proposed rulemaking or amendments to the regulations are in effect at this time, and this is a 4-year period from the date of the report.

The above two recommendations made to OPS are of the type which require outside contracting. Because of the contractual time, the review by OPS, the notice of proposed rulemaking followed by review of the remarks, and the resulting formal rulemaking require, of course, a long time to implement.

However, since the recent reorganization of the OPS, the new Acting Director has been in contact with the Board, and they have indicated that OPS would be acting more promptly on the safety problems we have identified.

The Alaska Pipeline project currently underway, after several years of delays and changes to resolve environmental concerns, incorporates noteworthy safeguards. This pipeline, for instance, utilizes a total of 142 isolating valves covering its 80-mile length; the distance between isolating valves is more favorable to safety than on any other pipeline in the world. There will be 62 remotely operated valves, 71 check valves (automatically operated), and 9 check and manual block valve combinations. In addition, this pipeline was analyzed for all types of possible failure situations before it was constructed. The effect will be that not more than 50,000 barrels of crude oil can be spilled in any one failure.

The Alaska Pipeline demonstrates that it is technically feasible to isolate failed pipeline sections of relatively short lengths and to do it in a very short time. It also demonstrates that it is feasible to specify a maximum amount of liquid spilled in any one failure and to design a pipeline to reach that goal. Thus, the safety achievements for environmental reasons far exceed what is required by current safety regulations.

Of course, it is important to have these proofs of feasibility, and they will be useful in evaluating better regulations. However, it may be even more important to consider whether there is enough motivation in the existing liquid pipeline safety statute (18 U.S.C. 834) to protect humans as compared to the protection offered the environment and wildlife under environmental protection statutes. The current pipeline safety statutes make no differentiation between regulations for new pipelines and old ones, for example, although it is less costly to require better safety features in a newly constructed line.

With respect to S. 2042, Senator Beall's bill, the Safety Board's views on this bill have been expressed in a letter to the chairman of the Senate Commerce Committee, a copy of which is attached.[1] You will note that the Board does recommend the enactment of the legislation.

Mr. Chairman, these are the matters concerning pipeline safety that come to our attention in the course of our investigations. At this time, we would be happy to answer any questions that you may have.

Senator HARTKE. Thank you, Governor.

From your experience in the field, how do you really assess the awareness of the general public to the hazards that exist with respect to pipeline safety and gas pipelines?

Mr. REED. Mr. Chairman, as a result of our investigations and experience, we find that progress has been made, but there is still a great deal of room for improvement. We believe more needs to be done to acquaint consumers and others at risk of the hazards, because we continue to find that the problem is not sufficiently recognized.

---

[1] See p. 19.

Senator HARTKE. In other words, as far as the general public is concerned, what we need is an educational program to educate them to the potential danger that does exist in this field. Is that what you are saying?

Mr. REED. Yes, Mr. Chairman, that is correct. We feel there is a definite need for an educational program, and rulemaking in this regard has been announced. That rulemaking will establish standards and regulations for an educational program. We have recommended that this be done and think this is certainly a step in the right direction.

Senator HARTKE. I would think the gas transmission people would be more interested than they apparently seem to be in alerting the general public to the potential hazards. After all, it costs them money to have trouble.

Mr. REED. Yes; that is true. We find that they are becoming more and more concerned, but as a result of our investigations over the years we have found that deficiencies do exist.

Senator HARTKE. How do you square this general recommendation where you have really asked for more regulation when the mood of the country is asking for less?

Mr. REED. We made our assessment as a result of our investigations of a number of pipeline accidents and concluded there was a need for this regulation. As far as voluntary participation is concerned, as you will note from my statement here, the Board believes that the "one-call" problem is being implemented quite rapidly and thinks it should be given the opportunity to see if it can be implemented on that basis. I would add that Mr. Sweedler attended a meeting just this week in which a great deal of emphasis was given to the one-call program. We understand that some States—for instance, Michigan—have a program in which one call will blanket the whole State. You may be interested in what he has to say on this.

Senator HARTKE. Fine, would you comment on that, and would you comment at the same time on the point of why you are content to be so convinced that industry will cooperate on a voluntary basis rather than on a mandatory basis?

Mr. SWEEDLER. Well, concerning the first part of your question, Mr. Chairman, the American Public Works Association at their annual meeting featured the utility coordination and location council. This was the council created based on the Safety Board report on the prevention of damage of pipelines, and just yesterday there was——

Senator HARTKE. Can you hear him in the back of the room?

They can't hear you.

Mr. SWEEDLER. Just yesterday there was a panel session on whether a coordinated approach should be voluntary or mandated. There were more than 200 people in attendance at this meeting, and there was quite a bit of interest shown.

But why voluntary rather than mandated?

Currently, there are more than or close to 50 of these one-call systems in operation or——

Senator HARTKE. Explain how that one-call system works.

Mr. SWEEDLER. The most important thing for the operators of the underground structures to protect their facilities from damage is to

be aware that someone will be digging near the facilities. The way to do that is to provide a service to the contractor that makes it attractive for him to notify the utilities. Keep in mind you may have 8 or 10 utilities operating in these areas, and you can understand the problems associated with getting in touch with every utility. So there was the one-call system set up. When the call is received, the message is teletyped or telephoned to each of the utilities advising them that the contractor will be operating in his area. The utilities then can go out to the scene and locate their installations so that damage can be prevented.

This has really proven to be quite effective and it is taking off, it is skyrocketing. New systems are springing up all over the country. Every week we hear about a new one. People call in for information on how to get these systems started.

In fact, the new utility coordination and location council is in the process of publishing a manual on how to start up a system. This was probably the No. 1 recommendation in our prevention of damage to pipeline report.

Senator HARTKE. Why wouldn't a mandatory system be preferable to the voluntary operation? In other words, what you are saying is in those areas where they do it, it is a good system but what about generally speaking if it is good for some, isn't it good for all?

Mr. SWEEDLER. Unfortunately, some of the laws which have been passed have actually impeded progress in this area.

Senator HARTKE. Federal or State laws?

Mr. SWEEDLER. State laws. I think the example was the Georgia law cited in the study. The Georgia law actually did not allow a one-call system to be implemented because it was too rigid and too muscle-bound. The law required 5 days written notice by registered letter. What has happened is the utilities have all gotten together and petitioned the Georgia Legislature to change that law. They have done that just last year. So now a new one-call system has started in Atlanta.

Senator HARTKE. Let me ask you something like this: Why wouldn't it be better to preempt the field and put in a Federal rule? Make it mandatory.

Mr. SWEEDLER. Because the situations in each of the communities and States are different. They each have slightly different problems. We are not saying that a one-call system is needed everywhere in the country. So if the law was such that it required certain things, if the law could be written so that it encouraged these things, that would certainly be a good approach. But to actually——

Senator HARTKE. Let me ask you this: Will you monitor the voluntary systems throughout the country?

Mr. SWEEDLER. No; we do not. We are familiar with them and we keep in contact with them.

Senator HARTKE. Do you know how many States will have them or where they will be?

Mr. SWEEDLER. Yes; we have an up-to-date list that was just discussed at this meeting the other day and I hope to have a copy within the next week or so.

Senator HARTKE. Will you make that available.

Mr. SWEEDLER. Certainly, sir.

[The list follows:]

EXCAVATION NOTIFICATION 1-NUMBER CALL SYSTEMS

Area served	Name of system	Contact person
Alabama: Birmingham	"Miss All"	Art Fleet.
Arizona:		
Phoenix	"Blue Stake"	Paul Collins.
Yavapai County (Prescott)	do	Phil Manwely.
Tucson	do	Manuel Nagore.
Wilcox	do	Gordon Sloan.
California: San Francisco—Oakland area	"U.S.A." (Underground Service Alert)	John Heyer.
Colorado: Denver	"Blue Stake"	
Connecticut: Entire State	C.U.U.P. (Connecticut Underground Utilities Protection).	Larry Senner.
Delaware: Entire State (includes parts of Maryland and Virginia)	"Miss Utility of Delmarva"	Mel Wyatt.
Florida:		
6 counties on west coast (Tampa-St. Petersburg).	"Call Candy"	Roy Afeld.
Dade County (Miami)	Underground Utilities Notification Center	Russ Weaver.
Georgia: Atlanta	Underground Plant Protection Center	Jim Hudson.
Illinois:		
6 counties in northern illinois	"Julie"	John Hainaut.
Chicago	"Digger" Utility Alert Network	Ronald Pinkowski.
Indiana: Indianapolis	"Utility Hotline"	Larry Davis.
Maine: See New England		
Maryland: Entire State	"Miss Utility"	Hank Davis.
Massachusetts: Entire State	"Dig Safe"	John Davidson.
Michigan: Entire State	"Miss Dig"	Mike Digon.
Nebraska: Omaha	"Hot Line"	D. L. Jordan.
New England: Entire States of Maine, New Hampshire, Rhode Island, and Vermont.	"Dig Safe"	John Davidson.
New Hampshire: See New England		
New Jersey: Entire State	Garden State Underground Plant Location Service, Inc.	Stuart N. Steggall.
New Mexico:		
Albuquerque	"Blue Stake"	Patty Boley.
Farmington	do	John Horn.
New York:		
Capital area (Albany)	"Underground Utilities Locating Service"	Art Peck.
Niagara frontier (Buffalo)	do	Charles Fields.
Rockland County		Steve Lesky.
Monroe County (Rochester)	"Mac Mole"	Joe Kleinberg.
Onandoga County (Syracuse)	U.F.P.O. (Underground Facilities Protection Organization).	Larry Cook.
Ohio: Entire State	Utilities Protection Service	Chuck Gabriel.
Oregon:		
Linn-Benton Counties (Corvallis)		Dick Price.
East Lane County (Eugene)		Lloyd Lindly.
Josephine County		Rich Cusic.
Umatilla County		Ray Cook.
Douglas County		Alta Artrom.
Medford		Bob Watson.
Wasco County		Del Freidling.
West Lane County (Eugene)		G. James Arens.
Pennsylvania:		
Western Pa. (Pittsburgh)	"Call Kathy"	John Flaherty.
Central Pa. (Harrisburg)	"June" (Joint utility notification for excavators).	Charles Becker.
Eastern and Philadelphia (Philadelphia)	"June"	Hans Peckmann.
Rhode Island: See New England		
Tennessee: Memphis	"Miss Locate"	Bob Gray.
Texas: Houston	"Cutest Little Number in Town"	Leroy Gardner.
Vermont: See New England		
Virginia:		
Tidewater area	"Miss Utility"	Hank Ames.
Northern Virginia (See Maryland), Roanoke	do	Dick Turpin.
Washington:		
Clallam County		Jim Tallman.
Clark County (Vancouver)		Al Van Horn.
Lower Yakima Valley		Jim Jefer.
Skagit County		Don Angottii.
Island County		Doug Sheppard.
Whatcom County		Cliff Curbow.
3 counties in central Washington (Wenatchee)		Bill Ross.
3 counties in northeastern Washington (Spokane).		Mike Moore.
2 counties in southeastern Washington		R. L. Bullock.
Thurston County (Olympia)		D. Kilkarney.
Grays Harbor County		Gary Yando.
Lewis County		Roy Mykalbust.
King County (Seattle)		Doug Damm.
Walla Walla County		Dave Mathews.
Benton County		Rod Hufstader.
Klickitat-Skamania Counties		Bob Sherwood.
Wisconsin:		
Dane County (Madison)		Don Marcy.
Milwaukee County		Don Koehler.

Senator HARTKE. And give second thoughts to your voluntary approach, will you?

Mr. SWEEDLER. I think there is room to encourage participation through legislation or even the threat of legislation if I might say.

Senator HARTKE. All right.

Thank you, gentlemen.

Mr. REED. Thank you very much.

Senator HARTKE. The next witness is Mr. William Jennings, the consultant from Franklin, Tenn.

All right, expert. Everyone says you are the real expert in this field.

STATEMENT OF WILLIAM JENNINGS, CONSULTANT, FRANKLIN, TENN.

Mr. JENNINGS. One of the earlier participants certainly.

Senator HARTKE. An expert is a man a long way from home.

Mr. JENNINGS. I hope 600 miles qualifies me.

Senator HARTKE. All right, proceed.

Mr. JENNINGS. Mr. Chairman, I am honored by your invitation to comment on the administration of the Natural Gas Pipeline Safety Act. It has been over 5 years since, as the first Director of the Office of Pipeline Safety, I last prepared a report for you on the administration of that act.

I have been a consultant to various natural gas pipeline companies most of the time since my resignation from Government in late 1970. However, I do not appear today as spokesman for, or on behalf of, the natural gas pipeline industry, or any part of it. I submit these views at the request of the committee, not at the behest of my clients.

I am limiting my remarks to the principal areas which I think need congressional attention. I hope my friends in the Office of Pipeline Safety and the other agencies, realizing that your concern is with those areas which should be improved, will forgive me for speaking only of their deficiencies. There is much good that I could say about them and their performance, if that would further the purpose of the hearing.

Having created the Office of Pipeline Safety and presided over the development of the first body of Federal safety standards for natural gas pipelines, I have firsthand knowledge of the origins of the program. And I have followed with understandable interest the developments of the last few years, so I am quite well acquainted with the present status. I premise this statement on that background. My comments are presented under four headings: Deficiencies in the OPS regulatory program; reasons for the deficiencies in the OPS program; role of the NTSB and pending legislation.

In my prepared remarks I have a few pages on deficiencies of the OPS regulatory program. Since most of those are now being corrected, I think—if those remarks would be considered included in the record—I should go on to the other headings.

[The information follows:]

Deficiencies in the OPS Regulatory Program

LIQUEFIED NATURAL GAS FACILITIES

The requirements for liquefied natural gas facilities are not adequate. The entire regulation should be expanded in breadth and depth of coverage and rewritten to conform to OPS regulatory standards.

OPS adopted the present LNG regulation in October 1972, incorporating by reference a publication of the National Fire Protection Association, NFPA No. 59A—Storage and Handling of Liquefied Natural Gas, 1971 edition. In the preamble which accompanied the adoption of 59A, OPS stated that it was "adopting the NFPA Standard only as an interim measure while developing permanent regulations specifically applicable to LNG facilities."

Early in 1974, OPS gave Arthur D. Little, Inc. a consulting contract to study LNG hazards and assess the adequacy of the LNG safety standards developed by governmental entities and professional safety societies. The final report, based on world-wide sources of information, was delivered in December. The report provides OPS the information that it needs for comprehensive LNG regulations.

EMERGENCY PLANS

Section 192.615 of the OPS regulations requires each operator of a pipeline facility to have written emergency procedures. But there is no statement of the particulars which the procedures must cover. The National Transportation Safety Board has found that inadequacies in emergency procedures contributed to the degree of damage resulting from seven accidents which it has investigated.

In March of this year, OPS issued a notice proposing to amend Sec. 192.615 by providing more detail as to the requirements for emergency plans. However, assuming that the proposed requirements are adopted, the section will still be defincient in two particulars. It still will not define an emergency. And it still will not specify the scope of the action which the operator's employees must take upon arriving at the site of the emergency.

Immediate on-site action procedures should include instructions telling employees when and how to: Search for gas migration to determine the full extent of the area of hazard; evacuate premises within the area of hazard; ventilate affected premises; eliminate sources of ignition within the area of hazard; stop flow of gas to the site of the emergency; notify company supervisory personnel as to the kind of degree of emergency; ask fire and police officials for help; and block off the area of hazard and reroute traffic.

APPENDICES A AND B

Appendices A and B of Part 192 are so far out of date that the regulations inhibit—even prohibit—the regulated industry's use of current technology and techniques. The appendices consist for the most part of consensus standards incorporated by reference into the regulations, covering such subjects as specifications for manufacturing, testing, and marking pipe, flanges, fittings, and valves.

When Part 192 was first issued in August 1970, OPS addressed this problem in the preamble, noting that "some commenters questioned how future edition changes would be handled, since pipe and materials built to a new specification could not be used if that specification were not referenced in the regulations." OPS then said, "New editions of referenced documents will be reviewed as soon as they are available and, if found to be acceptable, will be included in the referenced documents." With few exceptions, new editions of referenced documents have not been included.

At its last meeting in October 1974, the Technical Pipeline Safety Standards Committee, acting on its own initiative, recommended that OPS update Appendices A and B. OPS recently issued a notice, proposing to bring them up to date.

OFFSHORE PIPELINE FACILITIES

Part 192 does not adequately cover offshore pipeline facilities. Part 192 was based on the USASI B31.8 Code, which was designed for onshore operations. As a result, some of the requirements are not appropriate for offshore pipelines (e.g., line markers, class location, sole control of compressor stations, repair of welds, ditching and backfilling). And the regulations do not cover some of the problems which relate to offshore operations (e.g., design of offshore platforms,

design and test of pipeline facilities on offshore platforms, repair of underwater pipe, abandonment and inactivation of offshore pipelines). The regulations should be amended by both deletion and addition of requirements relating to offshore pipeline facilities.

In July 1973, the Interstate Natural Gas Association of America recommended amendments to Part 192 to cover offshore operations and gave OPS information in support of its recommendations. In September 1974, OPS published an advance notice of proposed rulemaking—in effect, a discussion paper—and invited public comment on regulations for offshore facilities. The response was voluminous, most of it quite good. The American Society of Mechanical Engineers responded by submitting a draft of offshore regulations, which it recommended that OPS adopt. From these sources, OPS has the information it needs for offshore regulations.

INTERPRETATIONS OF REGULATIONS

OPS frequently issues interpretations of its regulations, usually at the request of a state regulatory agency or a pipeline operator. An interpretation may enlarge or reduce the meaning of a regulation; in practical effect, an interpretation often amends the regulation being interpreted. OPS issues these interpretations without taking the procedural steps which are required for amendments, such as Sec. 4(b) of the Act which requires OPS to submit amendments to the Technical Pipeline Safety Standards Committee. Because of the amending effect of its interpretations, some of which have been far-reaching, OPS should submit proposed amendments to the advisory committee for a report on the technical feasibility, reasonableness, and practicability of each such proposal, just as it submits amendments.

RULEMAKING PROCEDURES

OPS has not published rulemaking procedures, which are needed to advise the public and also to govern the conduct of OPS personnel. In December 1970, OPS published Notice 70–14, proposing to adopt new Part 193—Rule-Making Procedures for Pipeline Regulations. No further action has been taken on this notice.

As proposed, Part 193 would have covered all appropriate subjects, including initiation of rulemaking proceedings, petitions for rulemaking and waivers, description of public docket, processing of rulemaking projects, and public participation in rulemaking.

Reasons for the Deficiencies in the OPS Program

OPS has its faults, particularly an unwillingness to stop studying and start acting; it could have moved more aggressively in its regulatory program. But Congress and the Secretary of Transportation must share the blame for the deficiencies in the administration of the Natural Gas Pipeline Safety Act.

Shortly after passage of the act in 1968, the President asked Congress to appropriate the full amount provided in the act for FY69. Congress cut the amount in half. OPS has never recovered from that cut. Since I prepared them, I know what happened to the OPS budget requests for FY70 and FY71; the Secretary of Transportation took a leaf from Congress' book and halved the requests.

Until this year, OPS has not had any field offices, except a two-man office in Houston. For some inexplicable reason, Congress would not permit OPS to establish additional offices. Without field offices, OPS could not effectively monitor industry's compliance with the safety standards and the states' performance of their delegated duties.

Congress has been less than diligent in its oversight of OPS. Your oversight hearings have a salutary effect, perhaps more than you realize. The scheduling of an oversight hearing triggers a review of an organization's activities, with appropriate corrective action. The administrator of a program really finds out what is going on; he is probably never better acquainted with his organization than the day he appears before you. Perhaps more frequent oversight hearings would have prompted correction of some of the deficiencies we are discussing today. Your failure to hold hearings may have led OPS to believe that its performance was satisfactory.

The Secretary of Transportation has never given OPS the organizational standing to do its job. He has never set it up as an operating entity; he has always kept it in the Office of the Secretary. As a part of the Secretary's office, OPS is re-

quired to follow procedures which were designed for the Secretary's 30 staff offices. These procedures were not designed for the conduct of an operational program. OPS does not even have its own legal counsel, although almost every action taken by it has a legal aspect. OPS has to take its turn with the Secretary's 30 staff offices for the attention of the Secretary's General Counsel. None of the attorneys on the General Counsel's staff is assigned to OPS as a primary function, even though the OPS workload would justify assignment of full-time counsel.

Last month the Secretary took two organizational steps, one forward and the other backward. The forward step was an order which created the Materials Transportation Bureau and assigned to it the pipeline safety and hazardous materials operating functions. MTB will be on the same organizational level as the administrations; although the order is silent on these points, this organizational standing should entitle MTB to write its own operating procedures and have its own legal counsel.

The backward step was that part of the order which separated policy functions from operating functions, insofar as the MTB offices are concerned. Prior to this, the Office of Safety Affairs developed and recommended departmental transportation safety policies. The operating entities of the department, including OPS, set their own policies, taking these recommendations into account. But MTB will not set policy for its two offices. The Office of Safety Affairs will develop and establish pipelines safety policies and the newly-created Office of Hazardous Materials Policy will develop and establish hazardous materials policies. Both of these policy offices are in the Office of the Secretary, organizationally unrelated to MTB. The separation of the policy and operational functions is folly; to compound the folly, the Director of MTB has to take policy directives from two separate offices, one for each of his operating offices. The Secretary did not order the administrations to take policy direction from one of his staff offices. He surely realized how ludicrous it would be to require the Administrator of the Federal Aviation Administration to stand hat-in-hand before the desk of a staff officer, asking what his policy should be in regard to some new problem which had arisen. Yet the Secretary has ordered the Director of MTB to stand hat-in-each-hand simultaneously before the desks of two staff officers, asking for policy direction. I repeat, this is folly compounded.

The Secretary's delay in appointing a director of OPS contributed substantially to the loss of momentum in OPS. I served over two years in an acting capacity; fortunately, as Chairman of the Hazardous Materials Regulations Board and Director of the Office of Hazardous Materials, my standing in the organizational hierarchy did not depend on OPS. The present director served about a year and a half in an acting capacity before receiving the appointment; unfortunately his standing did depend on OPS during that period.

After I left OPS, the Secretary downgraded the director to GS–16, which is not an appropriate grade for the administrator of a national program. In fact, some of the units within the Secretary's jurisdiction have division chiefs and staff assistants with a GS–16 rating. In addition to 9 executive level positions, there are 19 GS–18 and 38 GS–17 positions in the Office of the Secretary. After allocating a GS–18 to each executive level official as a deputy or senior assistant, there are still 48 people in the Office of the Secretary who have a higher grade than the OPS director. It seems that the Secretary considers 48 other functions in his office to be more important than the administration of the Natural Gas Pipeline Safety Act. And the director is the only supergrade in OPS.

The Secretary has failed on different occasions to make timely appointments to fill vacancies on the Technical Pipeline Safety Standards Committee. The members were appointed to 3-year terms, with the terms of five members expiring on December 31 each year. One year the Secretary did not make any appointments at all to the committee. As I recall, that was the year OPS stopped scheduling meetings of the committee.

Mr. JENNINGS. The reasons for the deficiencies in the OPS program. I will address the areas that I think need some changes. My comments don't look at the past; rather they look to the future in hopes of correcting the deficiencies that have been permitted to develop.

I think probably the deficiencies that I want to comment on most are those of Congress and the Secretary.

Congress has been less than diligent in its oversight of OPS. Your oversight hearings have a salutary effect, perhaps more than you realize. The scheduling of an oversight hearing triggers a review of an organization's activities with appropriate corrective action.

I was happy to see that the Secretary was setting up an entity, with the same standing as the administrations in the Department, to handle natural gas pipeline safety along with the hazardous materials program. However, the delay in appointing people to direct these programs is continuing.

I served as an acting director of OPS for a year and a half, 2 years actually, and Mr. Caldwell then was acting director for a year and a half before he was given a regular appointment. We have had comment already on the delay in appointing a Director to the Materials Transportation Bureau. The Bureau was created by an order signed in May and 4 months later we still don't have a director. I was happy to hear Mr. Barnum say that one soon will be appointed. The Office of Pipeline Safety Operations is again operating under an acting director.

The Secretary has failed on different occasions to make timely appointments to fill vacancies on the Technical pipeline Safety Standards Committee. We have had comment on that. I think to illustrate the point—I have lost track of the appointments—he has yet to appoint members to the committee whose terms ended on the 31st of December last year.

The role of the National Transportation Safety Board is my next comment area.

A review of the administration of the pipeline safety programs would be incomplete without a look at the role of the National Transportation Safety Board. The Independent Safety Board Act of 1974 increased the NTSB role in transportation safety. I believe that NTSB has an important role in promoting transportation safety, so I favor the purposes for which Congress adopted the 1974 act. But I am concerned about the potential for mischief in section 307 of the act, which prescribes the response which the Secretary of Transportation must make to each individual NTSB recommendation.

NTSB practice has been to conclude each accident report with a number of recommendations. This practice is historic. I question its validity in the area of pipeline safety. A single pipeline accident may focus attention on a safety problem, but it is a rarity when the investigation of a single accident will produce the kind of information that is necessary for a rational regulatory proposal. Rather, safety problems should be identified and defined by the long-term accumulation and analysis of all relevant operational data.

To maintain the integrity of its recommendations, NTSB should stop making recommendations with each accident report. As long as it is the practice to make recommendations on the basis of each accident, those who prepare accident reports will feel an obligation to make recommendations with each report. Over a period of time, considering the number of reports which the enlarged staff will make, this will almost surely debase the quality of, and public regard for, the recommendations.

NTSB should start making recommendations as a function separate and apart from accident reports. Then the recommendations can be

based on an accumulation of information about overall operational experience, free of the quota pressure engendered by the present practice.

Section 307 and 305(2) of the 1974 act put pressure on OPSO to publish each NTSB recommendation as a notice of proposed rulemaking. This sets in motion a process which takes a lot of manpower. It even takes an appreciable amount of manpower to reject a recommendation, because the reason for the rejection must be stated in detail, formally and in writing. NTSB could easily crank out more recommendations than OPSO could handle.

Unless the process is aborted at an early stage, the processing of each recommendation includes preparing a notice of proposed rulemaking, analyzing public comment received in response to the notice, holding a public hearing to receive oral testimony and argument, analyzing the record and preparing the draft of a regulation, submitting the final draft for comment by the Technical Pipeline Safety Standards Committee, and publishing the final rule. Since OPSO is required by law to respond to each of its recommendations, NTSB could preempt all of OPSO's regulatory capacity, effectively denying OPSO the right to set its own priorities and work on the projects which it believes to be important.

In raising this possibility, I do not impute any bad motives to NTSB. On the contrary, I admire NTSB's motives and see no reason to expect a change in the future. The distressing thing is that NTSB could preempt OPSO's entire regulatory capacity with the very best of intentions. After all, NTSB's principal function is to make recommendations. The more it performs this function, the more apt it is to subvert the orderly performance of the Government's overall pipeline safety program.

I respectfully suggest that this committee, through its oversight of OPSO and NTSB, maintain a balance between their respective roles. I do not suggest that you limit the authority of NTSB to make recommendations. That will not be necessary, if NTSB voluntarily policies the kind and quality of recommendations it makes to OPSO. Perhaps a starting point would be to disassociate the making of recommendations from the reporting of individual accidents.

Now to the legislation which you are considering.

I hope the committee will act favorably on the amendments to the Natural Gas Pipeline Safety Act that are proposed in S. 2183. In particular I urge adoption of the amendment to section 7 that would take safety regulatory authority away from the FPC.

On June 14, 1974, the chairman of the FPC testified before this committee that the FPC has authority to set safety standards for liquefied natural gas facilities. The chairman acknowledged that the Secretary of Transportation has primary responsibility for setting safety standards for pipelines and pipeline facilities, including LNG facilities. But the chairman claimed that the FPC, as a condition of a certificate of public convenience and necessity, has the right to set higher or different safety standards than those set by the Secretary. This is clearly a duplication of Federal authority.

The chairman made this jurisdictional claim with reference to LNG facilities, but the principle applies to all pipelines and pipeline facilities that are subject to FPC jurisdiction. In effect, FPC claims safety

jurisdiction over all interstate operations. The chairman, evidently recognizing that dual regulation is not acceptable, said that he would favor legislation to resolve the statutory conflict, if FPC and DOT could not eliminate it by interagency agreement.

Now—a year and a half after beginning negotiations—FPC or DOT have not reached any such agreement. It is time for Congress to resolve the conflict by adopting the proposed amendment.

Failure to resolve the conflict will continue a situation in which neither DOT nor FPC can be held solely accountable for LNG safety. It will permit continuance of a situation in which DOT has published inadequate LNG safety standards and FPC has not published any LNG safety standards at all. It is an anomalous situation indeed when two agencies each claim to have the authority to do something, but neither is held accountable for failure to perform the authorized function.

If FPC has not published any LNG safety standards, then how does FPC purport to perform its safety function? It requires an operator to get FPC approval of the safety of each individual installation. It has not set any standards which the facility must meet in order to get approval, but it requires each to get approval. In the absence of standards, approval is apparently a matter for negotiation between the operator and the staff of the FPC. The requirement for individual approval of facilities, without published standards which the facilities must meet to get approval, is a perversion of the governmental function.

Mr. Chairman, I have discussed that in four pages of the Regulator's Handbook, which I wrote 4 years ago, and I would like them to be put in the record.

Senator HARTKE. Yes, they will all be put in the record.

[The pages referred to follow:]

GENERAL STANDARDS OR SPECIAL PERMITS

Some regulations require regulated companies to get specific agency approval for each item of equipment and each operating procedure used in regulated activities. These regulations usually give little guidance as to what the agency will approve and seldom set standards for approval. Other regulations are so narrowly drawn or stated in such specific language that regulated companies have to seek special permission for new or different activities.

Regulations should set general standards for the conduct of regulated activities, but should not prescribe detailed means of performing the activities. The regulations should be stated broadly enough to cover the full range of activities which the regulator deems to be in need of regulation. The regulations should not require a regulated company to get agency approval before using any equipment or changing any procedure.

This scene is repeated all too often, in all too many regulator's offices: There is this problem—not yet defined, but identified by newspaper headlines and Congressional comment . . . They're demanding action, so we must act . . . Never mind that we don't know what to do, we've got to do something . . . All right, lets require each regulated company to get our specific approval for equipment and procedures used in the problem area. The scene ends in activity without action, the hard-pressed regulator's tried-and-true dodge. He doesn't know what needs to be done and he hasn't the vaguest notion as to what he may approve when a regulated company proposes something, but never mind—it'll take the heat off today.

This bit of gamesmanship gets the agency off the hook temporarily—and it's harmless. Harmless? This seemingly innocuous regulation has an unseemly potential for mischief, a potential which will almost surely be realized. When a regulation requires prior approval of something, but does not set a standard

for giving approval, it is the subsequent approval of the specific matter which actually sets the standard of conduct. Far from being innocuous, this regulation sets the stage for perversions of regulatory authority and evasions of the administrative procedures which Congress established to guard the integrity of the regulatory processes.

Agency approval of equipment and procedures gives the seal of government approval to the use of the equipment and procedures in regulated activities. No one can challenge the fitness of the equipment or the propriety of the procedures, except by filing a petition for rule making with the agency. If a regulated company, using approved equipment and procedures, injures an innocent bystander, the company can use the seal of approval as a shield against the injured person's claim for damages. In this event, the regulator will not have used his authority to protect the public, as Congress intended; rather, he will have used his authority to protect the regulated company. This perversion or regulatory purpose is discussed in Chapter 14, Adopting Industry Standards as Regulations.

Individual agency approvals of equipment and procedures are negotiated privately between agency employees and regulated companies, without public participation. This is an evasion of the procedural requirement that regulations (remember that the actual regulatory requirement is set in the individual approval) be issued only after notice of proposed rule making and opportunity for public participation. The lack of public participation means that action is taken on less than complete and validated information, since the applicant surely will not volunteer information adverse to his application. Further, since the approval authority is generally delegated to employees of considerably lower rank than the regulator, the practical effect of a series of approvals is that regulatory standards are set by employees who do not have the kind of staff support available to the regulator.

When regulations require prior approval but do not set standards for giving approval, the agency may publish in-house instructions to employees. The agency usually develops these instructions in consultation with industry, but without public participation, To the extent that these instruction set standards for giving approval, they have the effect of a regulation, so they should be adopted only after notice and opportunity for public comment. If he is to give approvals, the employee needs instructions, but the instructions should be published as regulations after notice and public comment. Better still, the regulator should publish regulations which set an adequate standard for the conduct of regulated activities, without reserving anything for private negotiation and approval. The regulator should be able to write better standards, with the help of his staff and the panoply of regulatory procedures, than one of his employees can negotiate in head-to-head bargaining with a regulated company.

Some regulations are written entirely in specifics, with every piece of equipment and every procedure individually prescribed. With this kind of regulation, the regulated companies must seek specific approval for each new or different activity, with all the vices noted above.

Mr. JENNINGS. I have mixed feelings about the amendments proposed in S. 2042. I favor the objectives that the amendments seem to be seeking, but I question whether some of the amendments will reach the obectives. Most of the amendments seem to be aimed at specific deficiencies in the Secretary's regulatory program. There are deficiencies, no question about that, but the proposed amendments will not reach them. The deficiencies are in the exercise of authority, not in the existence of authority. Deficiencies in the administration of the act will not be corrected by amending the act.

The act now gives the Secretary complete authority to set safety standards. When I was administering the act, I testified before this committee that there was no need for any more authority. That is still my opinion. There is no need to delegate specific authority when the general authority covers all the specifics that could ever be written. If fact, amending the act to prescribe specific authority could have an adverse effect on the general authority.

Section 3(b): This proposed amendment authorizes the Secretary to require that design standards give "special consideration in loca-

tions where subsequent excavation activity is likely to occur" and that the regulations cover "emergency plans and procedures"; this adds nothing to the Secretary's authority, because he already has authority to do this. Here is a case where you should seek improvement in administration, not a change in legislation.

Section 3(b)(1): This proposal would require the Secretary to include the reports and recommendations of the National Transportation Safety Board in the safety data that he considers in developing safety standards. Except in section 4(c), none of the proposed amendments relating to NTSB would serve any purpose. The Independent Safety Board Act of 1974 covers the DOT/NTSB relationship quite adequately.

Section 4(c): The proposal that the Technical Pipeline Safety Standards Committee review the Secretary's response to recommendations of the National Transportation Safety Board starts in the right direction, but it doesn't go far enough. The committee should advise the Secretary on the technical aspects of the NTSB recommendations before the Secretary responds to those recommendations.

Reviewing past actions would do no more than find fault with past acts. Only participation will improve the quality of current acts. The goal should be to improve performance rather than to find fault for poor performance. Therefore, I recommend that the proposed paragraph be changed to read as follows.

Mr. Chairman, I made some changes in the text of my prepared statement and I call your attention to the changes as I read them.

"(c) The committee shall meet at least quarterly. During each meeting the committee shall consider the reports and recommendations of the National Transportation Safety Board relating to gas pipeline safety and advise the Secretary on the technical feasibility, reasonableness, and practicability of the recommendations. A week prior to each meeting the Secretary shall provide the members of the committee with a summary of the NTSB's recommendations that the committee has not discussed."

Section 5(c)(1): This amendment would require the Secretary to provide funds for each State to hire an engineer and not less than one nor more than three inspectors. The Federal Government is interested in securing compliance with the Federal regulations, not with developing separate State programs. Therefore, the Federal Government should furnish money only for inspectors. If a State wants to develop additional State requirements, let the State furnish the money for the engineers to develop a separate program.

Note that this is an allocation formula. It will not provide any additional money. The required minimum of two persons per State would require more money than the $1.8 million now involved in the entire grant-in-aid program. Does Congress intend to appropriate the kind of money that would be justified to make this provision work? And a further question, does Congress want to favor the smaller States to this extent?

Section 11(a)(1): This proposal would require the companies to file a lot of plans with the Secretary or, in appropriate cases, a State agency. The companies should be required to have these plans, but the filing part of the requirement is totally without merit. The value of a plan cannot be determined in a regulator's office, isolated from the

fact situation to which it applies. The value of a plan can be determined only on the site where the plan is to be used. The companies should be required to have these plans available for onsite inspection, but it is a pointless exercise in paperwork to have them filed in the office of the Secretary or a State agency.

Section 11(b)(1): This amendment would require the Secretary or a State agency to consider the reports and recommendations of the National Transportation Safety Board as safety data during the evaluation of the adequacy of various plans submitted by the companies. This, in turn, would require the companies to consider these reports and recommendations as safety data as they developed the plans.

This would put an intolerable burden on the companies. The companies are bound by the regulatory actions of the Secretary and, for intrastate operators, State agencies, not by the recommendations of the NTSB. In fact, NTSB recommendations may at times be contrary to existing regulatory requirements. Congress should provide for the companies to live by requirements, not by recommendations. In this connection we must remember that the requirements are developed with the safeguards of the Administrative Procedure Act; the recommendations are not.

Section 13(a): This proposal would require—yes, require—the Secretary to do research and development work in nine specific areas. There is need for work in each of these areas. But there are other important areas that are not mentioned. Will the Secretary be able to add subjects to the list? Delete subjects from the list? If the answer to either of these questions is affirmative, what purpose will the list serve?

The priorities on research, testing and development are not static. They will not be the same next year that they are now. Will the Secretary be barred from research in other areas until these enumerated areas have all been completed? Or does Congress propose to establish a new list every year?

If Congress is really serious about covering all of these areas, and the language is mandatory, the appropriation will have to be increased manyfold. To illustrate this I call your attention to Chairman Reed's statement, in which he said the American Gas Association is looking at only one facet of one of these nine enumerated problems, just odorization of gas. They intend to spend money over a 3-year period and have appropriated $170,000 for the first year. I don't know whether we can make a straight line extrapolation, but if so, it would take half a million dollars to do a relatively small part of the research we are talking about here.

I might say, Mr. Chairman, I have seen little evidence of an intent on the part of Congress to appropriate the kind of money that would be required. If you are not going to furnish the money to do the job, you can't reasonably impose the requirement on the Secretary.

Section 14(a)(1): This amendment requires the Secretary to add "leaks" to the subjects that are included in the annual report to Congress. For this purpose what is a leak? If it means the ordinary leaks that are found and fixed every day by every company, the information would not be worth the effort.

The cause of leaks should be the subject of a regulator's concern, not number of leaks. Determining the cause of a class of leaks is important. From this information it may be possible to correct the deficiency that

is the cause, stopping future leaks of the class. The number of leaks is of no consequence in determining the cause.

The regulatory program should focus its efforts on identifying and eliminating the leaks that have a potential for harm to the public. It is a waste of effort to collect and report statistics on the gross number of leaks, most of which are of no safety significance.

Mr. Chairman, that concludes my prepared remarks. If you have any questions, I shall be happy to answer them.

Senator HARTKE. Let me ask you, as a former acting director in this area, is the budget large enough for the office to provide for the type of safety requirements that the country needs?

Mr. JENNINGS. It is not.

Senator HARTKE. How much more do you think it needs?

Mr. JENNINGS. I don't know what effect inflation has had, so I don't know in terms of money, but I know that the budget which I prepared contemplated staffing in excess of twice that which——

Senator HARTKE. Twice the staffing from the present time?

Mr. JENNINGS. That is correct. That is what I projected for the third year of operation.

Senator HARTKE. I gather what you say is you need more aggressive administration.

Mr. JENNINGS. No question about it.

Senator HARTKE. And you feel that that is a matter which Congress could be of some help if we had more frequent oversight hearings?

Mr. JENNINGS. I can assure you, Mr. Chairman, they are—they provide a remarkable stimulus to the review of a program. They give the administrator of a program a reason to look at it again. It goes along day after day, then an oversight hearing calls his attention to the fact that he will have to account to somebody else. It does have a beneficial effect, a great beneficial effect.

Senator HARTKE. But when you have a kind and considerate chairman conducting oversight as you have today, it doesn't have that effect.

Mr. JENNINGS. The first time I appeared before you, after I had created the office and hired the staff, without telling you anything about it beforehand, I brought the whole staff up and put them in the back of the room because they needed to get an education, a little stimulus, if you please, to effectively perform this governmental function. If you go back and read that record, you gave us that stimulus. I came up later and thanked you for the lesson. It was a fine staff lesson and it served its purpose.

There should be detailed oversight hearings at least annually.

Senator HARTKE. This is not a unique problem. It seems to be a problem that is in administration generally. But we are running into something that is different from what it was when you were here. That is, there is a growing tendency in the country to react negatively to the Federal Government and to these governmental regulations.

Do you feel that? Do you understand what I am talking about?

Mr. JENNINGS. We are talking about altogether different things, Mr. Chairman. The type of thing that people resist so strenuously is the very type of thing that the FPC requires where you file mountains of paper and go through long exercises of negotiations in order to get a permit to do something. The law ought to set the standards and turn business loose to do what the law requires.

This folly of having individual governmental approvals of everything done is objectionable, not the setting of objective standards that people are required to meet. I think the setting of standards would be welcomed if you get away from this interminable permit business.

You may have a different reading on the temper of the public, but——

Senator HARTKE. No, no, I hear you. I just don't see that type of administration responding out there. I think the problem is one of the reasons that individuals have a tendency to become bureaucrats and, unfortunately, it is the same reason that I see a change in requests on legislation.

You see, I think that the reason Senator Beall's bill is here is the fact that he doesn't see how he is going to get the job done in any other fashion. Do you understand what I am saying? In other words, he sees the problem, he sees the general standard there and you say the problem has been maybe a lack of sufficient funding, lack of sufficient personnel, or in totality lack of proper administration of the authority which exists.

Mr. JENNINGS. I do not say that the general standards are there. My problem is that they are not there. If you look at the specific deficiencies I cited in my prepared statement, I cited instance after instance of failure to set adequate objective standards.

Senator HARTKE. I understand that, but the problem from the legislators' side is attempting to respond to the people, whereas the bureaucrat attempts to respond not to the people, but really to the Congress in a way. Isn't that what he attempts to do?

Mr. JENNINGS. Yes.

Senator HARTKE. We are dealing with something that the Government generally and the DOT specifically might have to address itself to and that is how do you convince anyone sitting in our position that you are getting the job done when we hear the people coming from the other side saying they are not doing it in a way the law was written. That is what you are saying.

Mr. JENNINGS. I believe I agree.

Senator HARTKE. If I take your one statement, that is the essence of where you got back into it here:

> There are deficiencies, no question about that, but the proposed amendments will not reach them. The deficiencies are in exercise of the authority, not the existence of the authority.

Then you come back to this statement:

> If Congress is not going to furnish the means to do the work, it cannot reasonably impose a requirement on the Secretary to do the work.

Mr. JENNINGS. That is correct.

Senator HARTKE. I see that. I don't think the Congress is hesitant to provide the means.

Mr. JENNINGS. Well——

Senator HARTKE. I see that we have the other-side-of-the-coin evident. That is, they are hesitant to provide additional funds when they don't see the job getting done that they have assigned them to do.

Mr. JENNINGS. I think my statement about funds was with reference to a prescribed laundry list of research programs.

Senator HARTKE. I understand that. Generally speaking, yours is a good statement of the general complaints I hear.

Mr. JENNINGS. Well——

Senator HARTKE. If you talk to the people in the bureaucracy, they tell you, we just don't have the money to get the job done.

If you talk to the people out in the public, they say you have too many people out there working and we are wasting that money on that bureaucracy to do things which don't need to be done.

Now, let me give you a concrete example in another area, in the safety area. We had Ralph Nader in here on automobile safety. There was no question in my mind that I don't think he even realized the extent to which he shifted his own position. Whereas originally it called for general establishment of standards, now he came in and urged Congress to legislate a specific standard. That is wrong legislation because the Congress, in spite of everything else, should not freeze itself into positions. It is exactly the same thing that the Georgia Legislature did.

Mr. JENNINGS. Sure.

Senator HARTKE. They froze themselves into a position when they should have left it open for the administrators to go ahead and deal with it.

All right, let me ask you then——

Mr. JENNINGS. Senator, let me comment before you go on.

Mr. Chairman, I contemplated in my staffing a rather substantial part of these additional people as field people to be working with the compliance areas of the program. I don't advocate a large staff in Washington to write regulations.

I think if that staff, devoting itself to regulations as a primary function and allocating resources to where the need is, would be able to get along with the Washington staff. But we talk about compliance. What do you do on inspection and all? The answer is "nothing."

Why? Because they don't have the people. If you don't furnish the money, you can't talk about field inspections.

I spoke here of a job that could have been done with the people in Washington. If somebody wants to address the question of field inspections—whatever terms you use, I prefer compliance because enforceability is merely a tool toward compliance—then we are talking about double the staff, if you intend to do any field work.

Senator HARTKE. Mr. Jennings, let me say that if you had listened to the number of amendments to reduce agency field staff that we have to vote on on the floor of the Senate, I wonder whether you would agree with what you have said. Senator Curtis has 10 amendments over there. I voted at least 50 times on him trying to cut down on the number of field people in OSHA.

Mr. JENNINGS. Senator, you can't have it both ways. You either get off the Administrator's back about enforcement or compliance, let it go; or give him the people to deal with it. You can't really have it both ways.

Senator HARTKE. I hear you.

You referred to the need for upgrading the LNG safety standards and I think that you have indicated that the authority there basically belongs in OPS, right?

Mr. JENNINGS. That's right.

Senator HARTKE. And that they should have the authority rather than the Federal Power Commission; is that correct?

Mr. JENNINGS. Yes, the Natural Gas Pipeline Safety Act puts all the rest of it there, and there is an interface with ocean movement of LNG, which is regulated by the Coast Guard. To insure coordination of offshore and onshore operations, all safety authority ought to be in the Department of Transportation.

Senator HARTKE. What about siting? Do you think the siting should be in OPS too?

Mr. JENNINGS. I think siting is not a necessary requirement. If the regulations are properly drawn, no operator would be able to put a plant at an unsafe site. That is, the objective regulations would take care of the siting. But in the absence of adequate regulations then siting does have to be addressed specifically.

Senator HARTKE. You don't want them to, you would not be in favor of following European procedures where the government picks the sites?

Mr. JENNINGS. I don't think it is necessary at all. If you make strict enough standards for the site, then turn the man loose to go out and find whatever site he wants that meets those standards.

Senator HARTKE. What about the segregation of port facilities?

Mr. JENNINGS. You will have to address that question to the Coast Guard. I would rather not answer that. But if you do have a requirement for segregated port facilities, then that is itself a limitation on the siting of shore-based facilities.

Senator HARTKE. Let me ask you, in the field of enforcement, do you feel that civil penalties are sufficient or should there be criminal penalties?

Mr. JENNINGS. Civil penalties, I believe, are infinitely better than criminal penalties. I see no need, in what is essentially a civil function to have criminal penalties. The concept that the Secretary can administer the enforcement program with civil penalties and could not administer any part of it with criminal penalties, makes the civil penalties more attractive as an enforcement tool.

Senator HARTKE. There has been some question about the transportation of anhydrous ammonia. Do you think those regulations should be stiffened, changed or in any way modified?

Mr. JENNINGS. I wrote a discourse on that back in 1968, I think it was, and published it in the Federal Register. It raised a number of questions. Those questions have never been answered; that is, they have never been answered to my mind.

I have not kept up with it enough since then. I deal with natural gas now, but the questions existed in my mind then and those questions have never been satisfactorily answered.

Senator HARTKE. All right. Thank you, Mr. Jennings. Thank you for a good report.

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

FRANKLIN, TENN., *September 26, 1975.*

DEAR SENATOR HARTKE: After I finished my testimony yesterday, it occurred to me that I had not adequately explained the omission of some of my prepared testimony. The participants and audience knew the reason, of course; their function in life is keeping up with things like that. But you and your staff, the people for whose information the hearing was held, perhaps don't know, because this is not your prime function.

The hearing was first scheduled for June 24. I prepared a statement based on information available at that time. The hearing was rescheduled for July 9; I

again prepared a statement that was accurate as of that date. Unfortunately, I did not have time to revise my statement for the September 25 meeting, except for the supplement covering S.2024 and S.2183. The changes that should have been made in writing were made orally. These are the reasons for departures from the text—

On p. 2, the comment on liquefied natural gas should have been made as written, because there still has been no regulatory action. However, OPSO is in the final stages of work on a notice of proposed rulemaking which they plan on publishing within a month.

On p. 3, the comment about emergency plans should have been made.

On p. 4, the comment about Appendices A and B no longer served a purpose, because OPSO has published a notice of proposed rulemaking.

On p. 5, the comment about offshore pipeline facilities no longer served a purpose, because OPSO issued a notice of proposed rulemaking yesterday morning.

On p. 6, the comment on interpretations of regulations no longer served a purpose, if OPSO follows through with plans to hold quarterly meetings with the committee and seek committee counsel on the entire range of activities in the office.

On p. 6, the comment on rulemaking procedures no longer served a purpose, because MTB has published procedures.

On pp. 8 and 9, the comments about organizational deficiencies no longer served a purpose, because the deficiencies have been corrected. The counsel problem was solved as Mr. Barnum stated at the hearing; not quite all it should be, but acceptable. The comment about the separation of policy from operations requires more detailed comment. My written statement was based on an order, published in May, that announced creation of the Materials Transportation Bureau. When the formal delegations of authority were published in July, total authority was delegated to MTB; there was neither reservation nor delegation of separate policy authority. As Mr. Barnum said, in his prepared statement, MTB was treated the same as the administrations.

As you can see, there has been a lot of activity the past three months. I attribute it largely, perhaps wholly, to the stimulus of your oversight hearing.

I'm sorry I didn't keep your staff advised of these changes. I should have been as quick to comment on the correction of the deficiencies as I was to point out their existence. Mea culpa.

As usual, appearing before your committee was an interesting experience. I wish the other committees of Congress were as knowledgeable, as well run, and as preoccupied with the public interest.

With thanks for your interest in a subject dear to my heart—

WILL JENNINGS.

Senator HARTKE. Mr. George Bonner, director of energy division, New York Public Service Commission, and Mr. George Swartout, chief of the investigation unit.

Good morning, sir.

STATEMENT OF GEORGE BONNER, DIRECTOR, ENERGY DIVISION, NEW YORK PUBLIC SERVICE COMMISSION

Mr. BONNER. Thank you.

Senator HARTKE. Since the scheduling of these hearings, a meeting has been scheduled of the policy committee in conjunction with the Democratic caucus. Being a member of the Policy Commission, I have to leave rather soon.

I would hope you could summarize your statement and it will appear in the record in its entirety.

Mr. BONNER. I will summarize. A lot of what I say in the statement is covered already this morning.

Senator HARTKE. I don't know about the rest of them but I can't hear you. Maybe you don't want us to hear you.

Mr. BONNER. There are two subjects——

Senator HARTKE. There is an amazing thing about witnesses here and I know I have a hearing defect and I am not ashamed of it, I know other Senators who do, too, I frequently think some of the problems in Government are that people mumble too often when they should be shouting, so speak up.

Mr. BONNER. I would be glad to shout.

Senator HARTKE. All right.

Mr. BONNER. My testimony covers the effectiveness of the present act and the implementation features of it.

Our main concern is with the way the act is being handled.

Senator HARTKE. All right.

Mr. BONNER. The New York Public Service Commission thinks there is one major problem with the present act and this is the retention to the OPS of inspections on interstate pipelines. This was discussed this morning.

They set minimum stndards which are applicable across the country and they do not take into account local conditions. We believe the local conditions are really the prime requisite for determining what the standards should be in any given area. We think that the act should be amended to allow the State to apply the more stringent standards which they have on their own intrastate transmission lines to the interstate transmission lines within the state.

The fact is, to us, it makes no sense to have two lines parallel, a few feet apart, under different safety standards because one is inter- and one is intrastate.

Our second point would be that we think one of the problems with the implementation of the program by the office of pipeline safety operations is too little staff.

Now, Mr. Jennings made the comment that one of their problems is staff. With the small number of people they have, they are relegated to paperwork more than they are with working with the states trying to work out the problems or with the fieldwork which has to be done.

Many of the problems the States have with the OPSO have been corrected as of this week through a letter sent out by September 19th by the acting director of OPSO which sets up procedures for the States to meet with the office of pipeline safety operations to set up committees, to handle the problems, to have a two-way communication with them.

So our complaints in the testimony on those points are no longer valid. These matters have been taken care of this week.

With that I will just leave it at that, sir, and if there are any questions you have, I will be happy to answer them.

Senator HARTKE. You know, you say here in summary that you don't find this a partnership, it is a one-way street.

Mr. BONNER. Until the 19th of September it was. With the letter we received this week from the acting director of the office of pipeline safety operations, he has set forth procedures where we can work with them.

Senator HARTKE. In regard to the field offices which are being proposed, do you think that they will provide for an adequate level of inspecition on the interstate lines?

Mr. BONNER. No, sir, I do not. I don't believe that they will have sufficient personnel to do an adequate job. It would be a lot better than what has been done without the field officers.

In New York we use 30 people to run inspections on approximately 37,000 miles of pipeline. OPSO has 188,000 miles under them and they're only talking about 12 people.

So I believe they would need at least double the number that they have there to do an adequate job in field inspection, and with the economic climate of the industry the way it is now, you have to be out in the field to watch them, because if you are going to cut corners, that's where it is going to be.

Senator HARTKE. In your prepared statement you indicated that 23 States voluntarily act as Government agents for inspection of pipelines. You say New York State does not act in such a way?

Mr. BONNER. No, sir, we do not.

Senator HARTKE. In other words, who has the responsibility for inspecting the interstate pipelines in your State?

Mr. BONNER. The office of pipeline safety operations.

Senator HARTKE. And what has been the incidence of pipeline failures on interstate lines in New York?

Mr. BONNER. Very low.

Senator HARTKE. Very low?

Mr. BONNER. I think one in 5 years and it was a very minor one.

Senator HARTKE. You say OPSO does not have the inspection, are they not being inspected, and there is still a low incidence of failure?

Mr. BONNER. I believe there has been very little inspection, if any, on interstate lines.

Senator HARTKE. In other words, what you are saying to me is that—maybe we better get rid of the inspectors?

Mr. BONNER. No, I think you can look at——

Senator HARTKE. What?

Mr. BONNER. There is another way to look at it. These interstate lines are under the jurisdiction of the New York Public Service Commission for many years prior to 1968 and maybe there is a continuation from that. They have not deteriorated since 1968 when we quit inspecting.

Senator HARTKE. Well, all right. Maybe we ought to abolish the office.

Mr. BONNER. No, I don't think so.

Senator HARTKE. Well, if you are getting good results without inspection——

Mr. BONNER. By happenstance probably.

Senator HARTKE. I didn't hear you.

Mr. BONNER. Probably by happenstance more than anything.

Senator HARTKE. By happenstance?

Well, all right. Thank you.

Mr. BONNER. Thank you.

Senator HARTKE. I may have some questions for the record for you, all right?

Mr. BONNER. Certainly. I would be glad to answer them.

[The Statement and questions and answers follow:]

STATEMENT OF GEORGE E. BONNER, DIRECTOR, ENERGY DIVISION, NEW YORK STATE PUBLIC SERVICE COMMISSION

Mr. Chairman and members of the Subcommittee, I appreciate the opportunity to present the views of the New York State Public Service Commission on the effectiveness of the Natural Gas Pipeline Safety Act of 1968 and its implementation by the Office of Pipeline Safety.

The Natural Gas Pipeline Safety Act provides for federally established minimum gas safety standards for interstate gas pipelines, for local gas transmission lines and distribution lines. The states remain free to regulate the safety of gas distribution systems and local gas transmission lines provided the states adopt the federal safety standards or impose more rigorous standards and have the ability to effectively enforce these standards. The states are prohibited, however, from regulating the safety of interstate gas pipelines.

OPS has interpreted the Act to allow them to have a state pipeline safety agency voluntarily act as their agent for inspection of interstate pipeline facilities but without any enforcement powers. We understand that some 22 states have volunteered to provide OPS with inspection service for interstate lines. Also, that voluntary agency relationship can, under the Act, only extend to the minimum federal safety standards, not to the state's safety code if and where it is more stringent. OPS has stated that this arrangement was necessary because of their limited staff.

In those States such as New York, which do not act as agents on interstate pipelines, little if anything is done to assure that these pipelines are complying with the federal regulations.

There are many reasons why New York State has not chosen to act as a voluntary agent under this agreement, but one of the primary reasons is our inability under the law to either employ or enforce our more stringent standards—standards which are very specifically tailored to conditions in New York State—standards which are, of course, not properly applicable to States of lesser population density in grossly different geographical areas throughout the country.

Gas safety practices and regulations must take account of local conditions such as existing and potential population densities, construction and industrial activity, terrain, and soil conditions. The Natural Gas Pipeline Safety Act recognizes the importance of local considerations. It allows the States to assert and enforce more rigorous safety standards than the Federal minimum standards for distribution systems and local transmission lines. Yet the Act prohibits States from regulating the safety of interstate gas pipelines even though the interstate lines often run through population centers and parallel or cross local distribution systems and transmission lines. There is no justification for the distinction. If anything, the interstate pipelines offer the greater hazard because they are typically under higher pressure and transmit greater volumes.

Nationally uniform federal minimum standards for interstate gas pipelines will be either inadequate in more populous states or (if appropriate there) will be unduly rigorous and costly for more open territory. I can conceive of a detailed federal gas safety program that takes direct account of local consideration appropriate to each state and locality. That kind of federal program, however, either would be massively duplicative of state programs, which are necessary to regulate distribution systems and local transmission lines in any event; or else that type of particularized federal program would be almost entirely dependent on following the initiative of the states, in which case there seems to be no propriety in preempting the states. The Office of Pipeline Safety has chosen the first course, establishing a nationally uniform set of "minimum" standards for interstate gas pipeline safety that are not sufficient for many areas in New York and elsewhere, where more intensive safety precautions are necessary. These are called "minimum" standards because the interstate pipeline companies are free to exceed them in their discretion. Insofar as the states are concerned, they are maximum standards. The state should be given the authority to impose and enforce more rigorous standards on the interstate pipelines.

I also understand that OPS intends, or is at least considering, rescinding the 22 or so informal interstate agency agreements with the advent of the new OPS field offices. Because these informal agency relationships were allowed by OPS mostly because OPS had insufficient inspection staff, one must assume that the additional 8 or 10 engineers will be sufficient to perform the necessary inspection and voluntary enforcement functions on 188,000 miles of interstate gas transmission pipeline. We have a staff of 30 technicians and engineers dedicated full-time to pipeline safety who are fully employed in keeping up with their auditing inspection and enforcement activity on our 37,000 miles of distribution mains and 1600 miles of intrastate gas transmission pipelines. We also have some 40 other engineers in the Gas Section of the Energy Division who are able to help the safety staff if it should become necessary.

The federal minimum pipeline safety standards as promulgated and administered by OPS are and have been repeatedly claimed by OPS to be performance in nature and not specification or even guideline. Many of the regulations

are certainly specific such as various pressure testing requirements which specify the test pressure and test period, inspection requirements which specify maximum inspection periods, allowable operating pressure requirements, odorization requirements, welding requirements, corrosion control test and survey requirements, spacing of block valves in transmission lines, design criteria, etc., etc.

Our New York State gas safety code is somewhat more specific, particularly with respect to preventive maintenance inspections and inspection periods and the fact that we have a uniform system for classifying the degree of hazard associated with gas leakage and prioritized requirements for leak repair and surveillance activity and response keyed to the degree of potential hazard.

Some specific differences between the New York and OPS codes and the reasons therefor are as follows:

Part 191, Section 191.5 of the federal regulations, requires telephonic notice of certain leaks, or accidents, which cause death or personal injury requiring hospitalization, property damage amounting to $5,000 or more, ignition of escaping gas from a leak other than during construction or maintenance work, or which result in a section of transmission pipeline being taken out of service. On the other hand, we require immediate reports on all accidents where gas facilities may be involvd which cause injury or death to any person or damage to property without consideration of such limiting factors as the cost of the damage or whether or not injured persons required hospitalization. This provides us a wealth of additional information on gas accidents and also provides us with the ability to investigate a much broader spectrum of gas incidents. I believe it is OPS' intent to collect data on the most spectacular accidents for statistical reasons—they do not have the staff to investigate them. We investigate over one hundred incidents a year varying from minor explosions in manholes to major accidents when they occur. It gives us a much truer picture of the hazards and the operational difficulties or errors which cause them. We are thereby given the ability to analyze our standards as they relate to the experienced hazards and to improve our rules accordingly to improve the safety of gas operations.

Part 192, Section 192.243(d) establishes the federal minimum standards for nondestructive testing of pipeline welds. The percentage of the welds which must be X-rayed is based on the class locations of the pipeline which is a measure of the population density of the area through which the pipeline is passing. This federal rule requires 10% x-ray in Class 1, 15% in Class 2 and 90 to 100% in Classes 3 and 4 which are, of course, the highest population density locations. Because of the character of New York State, its population density and other factors, our requirements for x-ray of welds are more stringent than the federal rules. We require 15% x-ray in Class 1, 40% in Class 2 and 100% in Classes 3, 4 and 5. Class 5 is an additional class location designation necessitated by the characteristics of the New York City metropolitan area. Our standards are carefully tailored to New York State; whereas, the federal minimum standards are the least common denominator effective throughout the country with all of the variable topographic, geographic and population densities which are found.

Part 192, Section 192.365 requires outside service line valves for ready emergency shut-off only where they are feasible which provides for interpretation of what is or isn't feasible. We feel in New York State that there should be no choice on high pressure service lines, on service lines to public buildings or on service lines 2 inches in diameter and larger and our rules reflect that opinion.

Part 192, Section 192.505 and 192.507 in combination with Section 192.619, establishes test requirements for the highest pressure pipelines. The federal rules for determining the required test pressure are somewhat complex depending on stress levels, class location units and other factors. Ours in New York are simpler yet more stringent. To illustrate, I'll use the period for which the test pressure must be held as an example. For pipelines to operate at a hoop stress greater than 30% of the specified minimum yield strength of the pipe material, the federal rules require that the test pressure hold for eight hours, without any statement regarding stabilization of the test pressure. For pipelines to operate at pressures of 125 pounds per square inch gauge or greater, we require the test pressure to be first stabilized and then to hold for a period of 12 hours. Although there are some technical arguments in opposition to our opinion, we feel that a leakage test can be reasonably combined with a strength test and, for that reason, we require pressure stabilization before the test begins so that it can be possible to detect relatively small pressure variations which may be indicative of leakage.

You'll note that we use the simple parameter of operating pressure to trigger our standards in this area rather than stress level as used in the federal stand-

ards. We fully agree that stress level is technically a better parameter from a pure strength of materials or engineering point of view. But pipeline pressure testing is a field operation. We employ technicians rather than graduate engineers for the majority of our field work and operating pressure, as we employ it, is not only simpler in the field but it is more conservative. We have found that, with adequate training and experience, technicians can perform the grand majority of our field auditing and inspection functions as well as engineers and, frankly, because technicians salaries are lower, we can get more safety inspection for our dollar. Another factor is that an experienced and qualified engineer would soon become bored and disinterested in performing everyday inspection and quality control auditing functions.

Part 192, Sections 192.739 and 192.743 establish annual inspection requirements for, respectively, pressure regulating stations and pressure relief devices. We are definitely more stringent in this area. Our code requires weekly regulator station inspections for leakage and operating condition, an annual inspection with overhaul if necessary, and an internal inspection of the regulator throttling mechanism every two years with, of course, repair and overhaul where necessary. We require semi-annual performance tests and inspections of overpressure protection devices. Our standards reflect the criticality of regulator station operation to the safety of gas distribution systems.

The above are some examples of where our code is more stringent than the comparable requirements in the federal minimum standards and why they are so. Our code also extends beyond the federal standards in some areas. One of these is what we call our leak classification system. This system provides for the standardized classification of the hazards associated with gas pipeline leakage conditions and, with priorities based on the degree of potential hazard, it establishes a required schedule for the repair and surveillance of leakage locations. We feel that the age of many of the urban systems in New York makes this approach necessary to better assure the safety of the public. It also provides us with a very necessary measure of the performance of our gas utilities in this critical area of leakage management and control.

Another instance where we go beyond the federal minimum standards is in our notice requirements. Unlike the federal code, we require prior notice and specifications for transmission line construction, reconstruction, recertification to a higher pressure and also when low pressure distribution systems or portions thereof are being raised to a higher operating pressure. Without such prior notice we could not possibly peform our function effectively as regards review of pipeline design prior to construction as well as to having full knowledge of pipeline construction activity so that we can be assured of being able to perform our inspection function on a timely basis.

But whatever the balance is in the codes between specification, performance and guideline type language, it is necessary to get out into the gas operator's operating headquarters and out in their systems to effectively monitor and elicit compliance. With respect to interstate transmission pipeline facilities, as I have previously discussed, it is OPS' direct responsibility to inspect for and enforce compliance, The Act allows certified state agents of OPS to perform the inspection and enforcement functions for intrastate gas facilities. OPS, however, still has the responsibility for monitoring the effectiveness of its state agents in accomplishing those functions.

Considering the number of technical staff at OPS, it is understandable that our program has only been audited twice by OPS; once in 1972 and again last winter. The 1972 audit involved a one-day visit by an OPS staff member. The audit this year was an in-depth management audit lasting more than a month and was performed by a competent, professional management auditor. The auditor, however, had no experience which related to the gas utility industry so, although it was extremely helpful to us and I'm sure the OPS, with respect to our program managament methodology, it was not particularly effective with respect to the absolute technical quality of our program product. We understand that three other states have been audited in the same way. These auditors were employees of the Department of Transportation but they were not part of the OPS staff.

Also, there are, to our knowledge, no standards set or guidelines published by OPS with regard to the acceptability of state agency pipeline safety programs for auditing, inspections, enforcement or other pipeline safety work activities which OPS may expect of their state agents. Our program is one of long standing, some 23 years, but we are constantly attempting to improve our effectiveness through changes in methodology.

Absent standards or guidelines from OPS, we wonder what real purpose such an audit as we participated in could serve in terms of measurement of our effectiveness. Also, some indication from OPS as to what is expected of us would be extremely helpful in developing and improving our program. We, and I am certain most other states, would be willing to cooperate with OPS in this regard.

A problem in this area may be that OPS does not have a wealth of on-the-job experience in field inspection and compliance activities on a day-to-day basis as has been developed in the state agencies. I imagine it would be rather difficult for OPS to develop a workable, realistic model state agency program to either provide guidance for the states or to measure the quality of existing programs. I do not intend to be critical of the present OPS personnel in this line of commentary—considering their number they must be stretched very thin in just keeping up with their paper work duties.

I might suggest that OPS consider setting up working committees of state agency representatives in order to develop program guidelines. With such a program OPS could effectively use the "front line" experience gained by the state agencies to everyone's benefit. OPS could better measure our programs and we would have a useful tool for improving them.

OPS has attempted to provide the states, and the industry, with technical guidance through speaking engagements and training programs. But unless the technical capability so developed is properly channeled into and used in the auditing, inspection and enforcement programs of OPS and the state agencies, its effectiveness is certainly not being maximized.

In relation to the matter of staffing and program coverage, I would like to note that in its report to Congress on federal-state relations, OPS stated that New York needs "additional funds and staff for progressive improvements in its gas safety program including more frequent inspections of existing gas facilities, as well as facilities under construction." I would like to do more myself, if only we had the budget for it. But I am disturbed that we, who do so much more than others, even considering our population, were subjected to that criticism. For 1972, which is the last year for which I have statistics, the New York safety staff comprised 20% of the total state agency pipeline safety staff in the United States and New York spent 17% of the total cost of state pipeline safety programs in the entire country.

Another matter which I feel is identifiable as a problem area in OPS administration and effectiveness is the statistical material which they collect from the industry and the state agents.

The basic statistics collected from the industry are the annual leak reports and the individual reportable leak or incident reports. There appear to be three problems with OPS administration in this regard. They are the adequacy of the form or the type of information which is elicited by OPS, the quality control and standardization of the data submitted, and the use or purpose of the data.

Without getting ino the matter of instructions for completing the forms, definitions of terms and other details, the data does not ask for any distinction as to the relative degree of hazard of the leaks being reported on the annual form. This type of data is essential if the information reported is to be useful in determining actions which can be taken to rationally improve pipeline safety. Data without information as to the relative degree of hazard associated with the various conditions of leakage can be very misleading and can lead to actions with misdirected priorities as regards their true effect on public safety.

The critical aspect of quality control of this data from the industry should be of real concern to OPS. With respect to intrastate operators, many of the state agencies of OPS have agreed to monitor the quality of these reports by the industry. But the problems with the type of information being requested, standardization of the data bases, and questions as to the intended disposition or use of that data make it very difficult for the states to effectively carry out the quality control function.

A recent report by the University of Oklahoma under contract to OPS for the analysis and management of the pipeline safety information system which I am discussing came to similar conclusions. The report includes recommendations for improving the data which is being elicited and refers to problems with data accuracy and calls for a more extensive data review and audit procedure in order to assure accurate data for analysis.

Similar problems exist with respect to the data which OPS obtains from the state agencies. The form of the data being requested is questionable, standardization of data is a problem, quality of the data submitted is not effectively

monitored and, as a result, the data can be misleading and is of uncertain value as regards pipeline safety.

We must recognize, of course, that with OPS' present level of staffing, such an in-depth quality control effort of either the industry or state agency statistics would be an impossibility. But, improving the guidelines would go a long way, and that could be effected to some degree by again employing working committees from the state agencies.

Another area, that of OPS' methodology for obtaining technical advice relevant to pipeline safety, also troubles me with respect to the administration of OPS. A number of costly studies by independent consultants have been contracted for by OPS over the last year or so. Some of these are studies of rapid shutdown of gas systems, a general study of distribution system safety, a study of natural gas odorization, etc.

I'm sure that independent studies are and will be necessary at times to supplement the technical capability, but more probably, the available staff time at OPS. But I'm also sure that OPS could make better use of the technical advice available to it right now. The Technical Pipeline Safety Standards Committee could, in my opinion be more efficiently used in the development of new and amended standards and regulations.

Also, coming back to a point I have made before, I'm sure that OPS is not making efficient use of the technical expertise available to it in the state agencies. Our collective technical capability throughout the country is considerable, and, in terms of its application for the purposes of OPS, it is well tempered by our experience with dealing with safety standards in the field. We are, and have been, the interface between OPS, the regulations, and the operating companies. Our advice to OPS regarding the practicability and, in particular, enforceability of regulations should be a very real factor in their considerations. Our input as to the applicability of technology to the regulations should also be another real factor in the process at OPS. Again, it would appear to me that OPS could potentially improve their function, and maybe save some money in the long run, if working advisory committees of state agency pipeline safety representatives were to be established to provide assistance to OPS in a technical advisory capacity.

Another point I'd like to discuss is the overall regulatory attitude of OPS. I find their willingness to overextend their scope of jurisdiction when compared to their resources, and the resources of jurisdiction when compared to their resources, and the resources of the state agencies, most disturbing.

A case in point is the matter of "beyond the master meter" operators of gas distribution systems. I understand that these systems include facilities both above and below grade in public or private multi-structure or high rise apartment, commercial or industrial complexes, public and private colleges and universities, state and local government institutions, etc. where gas is purchased through a master meter (or meters) and then distributed to the owner's or landlord's tenants or lessees located in the one or more structures. The number of such systems in the country would be difficult to even estimate, but the numbers would be considerable to say the least. In New York where we have the largest state agency pipeline safety staff in the country, we could not hope to effectively deal with these thousands of additional operators. OPS, however, is encouraging us to do so.

These "beyond the master meter operators" are not professional gas utilities; they are real estate managers of garden apartment complexes, municipal housing authorities, colleges, etc. Neither the federal standards nor ours in New York are intended to be applicable in an effective way to this set of operators with respect to their technical and operational capabilities as well as to the imposition of reporting requirements. The existing standards are designed for gas utilities. We in New York, while agreeing that there is a potential for safety hazard in gas distribution systems beyond the master meter, do not feel that extending a paper jurisdiction which we could not enforce in an effective way is a proper course of action.

This same line of commentary would also be applicable to OPS' definition of "service line" as it relates to gas distributed in high rise buildings. Consider a high rise commercial building wthout a master meter but with meters at each customer's location within the building all the way up to the top floor.

According to OPS the gas riser in the building, all the way to the top floor where the last meters are located, is a distribution main and is the responsibility of the gas utility.

This sounds fine, but does not give any credence to the realities of local conditions as regards conflicting jurisdictions with city, town and county building

departments, and home rule concepts in cities. Although this extension of jurisdiction seems simple and appears to be a responsible action on the part of OPS, it is frequently an administrative nightmare and virtually impossible to enforce even if the gas operators were able to effectively deal with these situations. This "main" within a high rise building is frequently located within the walls of the building which, of course, the gas operator doesn't own and may not have any right to disturb under local law.

OPS appears to be inflexible in their response to local conditions as the above situation exemplifies. We certainly respect OPS in their attempt to be tough, firm regulators, but the real objective of pipeline safety must be kept foremost in our minds. A policy of absolute consistency and written regulations does not always accomplish that objective.

Another example of inflexibility has been published frequently by OPS, that being their statement that, with respect to the cathodic protection requirements, "in view of the long lead time already provided in the regulations, OPS believes that waivers from the . . . regulations would not be appropriate." If OPS means what they've said, then neither natural disasters, technical difficulties nor any other unfortunate but unavoidable circumstance could be used by an operator as a reason for missing an arbitrary dealine. Again, we respect OPS' intention to be a tough regulator, but inflexibility does not always accomplish the objective of improving pipeline safety.

State agencies such as ourselves should be fully apprised of OPS' attitude with respect to the pipeline safety regulations. OPS publishes selected interpretations in their monthly Advisory Bulletin but they only publish excerpts from interpretations of key sections of the federal standards which are of the broadest interest and appear, in their opinion, to be of greatest importance in achieving pipeline safety. This may be all right for general interest readers of the Bulletin. But if we state agencies are truly to be full partners with OPS in administering and enforcing the standards, we should be made privy to and kept fully informed of all interpretations of the standards which they consider in any way. I am not saying that all actions need be published in the Bulletin. I am saying, however, that state agents, being in full partnership with OPS, should be fully informed of the action of OPS.

A major item is the subject of funding of state programs for pipeline safety. The Pipeline Safety Act provides the states should be given federal funds in amounts up to 50 percent of the cost of running the state programs. In New York we have received primary grant allocations varying from a low of $17,358 in 1971 to $47,678 in 1974. Our 1975 primary allocation is scheduled to be $40,562. We received an additional $122,534.99 in 1974 which was our allocated share of money turned back or unused by other states. Our total 1974 grant, then, was $170,212.99 which amounted to approximately 30 percent of our total annual pipeline safety budget. The primary allocation for 1974, however, amounted to only 7 percent of our budget.

The additional allocation over the primary grant cannot be counted on. As the other states upgrade their programs they will be qualifying for their share of the pot and the additional allocation for New York will be decreasing every year. Our primary allocation of $40,562 for 1975 again amounts to about 7 percent of our budget. In the report to Congress on federal-state relations, OPS states that almost every state should have a larger staff and spend more money. However, up until now, the primary federal grants have come no where near providing for 50 percent of the cost to operate the state programs. It is becoming increasingly difficult if not impossible for some states to increase taxes in order to expand their safety programs. Tax increases by the states would not be required to expand state programs if the federal government would provide funding for 50 percent of the cost of running the states programs as provided for in the Act. Adequate funding of the state enforcement agencies is crucial to the success of the national gas safety program.

With respect to OPS' administration of the grant-in-aid program, the paper work they require in order to qualify for and obtain a grant is, in my opinion and in the opinion of many other state regulators, much more than should be reasonably necessary. In fact, some regulators have indicated that if it weren't for today's economic climate adversely affecting state government, they would refuse the grant just to avoid the volume of paper work and, of course, the unproductive man hours associated with preparing it.

We in New York State certainly recognize the need for a pipeline safety program. We have had a pipeline safety code and a staff to administer and enforce it since 1952. We also regulated interstate pipelines without any major prob-

lems until the Pipeline Safety Act of 1968 preempted our right to do so. Our code and our staff changed and grew over the years as we attempted to respond to the changing conditions and needs in our state.

The present economic crisis we are all experiencing makes our pipeline safety program more important than ever before. The present natural gas shortage and future gas supply predictions make it obvious that new gas distribution systems are going to be rare. The critical parts of our pipeline safety program must be designed to place the major emphasis on preventive maintenance and safety of operation. Of course, any new system as well as replacement of existing systems must be given proper weight in any program.

But new systems and major replacements are capital expenses which can be spread over a number of years through depreciation expense. But operating safety and preventive maintenance requirements in our codes are items of annual expenses. Revenue for those expenses must be obtained in the year they are spent—they have a very real effect on a company's income statement for the period. This means that many companies who are feeling the financial pinch may be very reluctant to spend money on preventive maintenance in particular. We have already seen attempts by companies to defer preventive maintenance even where required by the codes. The vigilance of our pipeline safety programs are then extremely critical in this area right now. We all recognize that deferral of preventive maintenance work causes immediate potential safety hazards and increases the potential for hazard in the future.

In summary, my commentary on OPS can be expressed as an appeal to OPS to follow through on their published statements indicating that the national pipeline safety program is to be one of partnership, or "common stewardship," to use their terms, of federal-state interest and responsibility. It appears to me that, up to now, we state agents have been at best a stepchild to the OPS administration. Informational communication has been a one-way track into OPS with very little return. If we are to be of help to OPS, and vice-versa, OPS is going to have to change their attitude toward the state agency relationships—they are going to have to allow us to become full members of their team.

I also believe that OPS should back up and take a look at their regulatory attitudes and methodology. The cautious flexibility of practical realism is going to have to be considered in their actions, otherwise, their effectiveness will be limited by the natural resistance of those they regulate.

Question 1. In your prepared statement, you indicated that 23 states voluntarily act as the government's agent for inspection of interstate pipelines. You indicated that New York State does not act as such an agent.

(*a*) Who has been responsible for inspecting interstate pipelines in your state?

(*b*) What has been the incidence of pipeline failures on the interstate lines in New York?

(*c*) You indicate that where a state voluntarily acts as an inspection agent for OPS on the interstate lines, that such states lack enforcement powers. What happens if a state inspector finds a violation? Who brings the enforcement action?

Answer 1.(*a*) To our knowledge no one has been physically inspecting interstate natural gas pipelines in New York State.

Answer 1.(*b*) There have been no significant interstate pipeline failures that we know of since we were caused to stop inspecting them in 1970. It must be said, however, that we left them in pretty good shape.

Answer 1.(*c*) If an inspector in a state who voluntarily acts as OPS' agent on interstate pipelines finds a violation, that state simply reports that violation to OPS and can do no more. Any enforcement action can only be initiated by OPS.

Question 2. OPS plans to establish a network of field offices to insure compliance with regulations, particularly with respect to interstate lines. Do you believe that these field offices will assure an adequate level of inspection on the interstate lines?

Answer 2. No, I do not. There will be only two engineers staffing the regional office for all of the states in the northeast region. There are many thousands of miles of interstate pipeline in that region. Those two engineers are also responsible for monitoring for performance of each of the state agents of OPS in that region.

Question 3. The single largest source of pipeline incidents are due to excavation projects.

(*a*) What system does New York State employ to reduce the number of these accidents?

(*b*) What should OPS do to attack this problem?

Answer 3.(*a*) We obtained legislation in 1974 which was designed to minimize foreign excavator damage to underground utility facilities. That legislation also furthers and supports our policy of encouraging "one-call" or other expedited notification systems which are extremely effective in reducing foreign excavator damage. We now have five "one-call" systems in New York State with more being developed.

Answer 3.(*b*) OPS encourages the development of state legislation for the avoidance of foreign excavator damage and also encourages the development of "one-call" or other expedited notification systems. I think they are doing the best they can considering their capabilities. Excavator damage is a problem that can best be handled at the local level. Simply improving lines of communication between excavators and underground utility operators through such devices as local coordinating councils has been shown to go a long way toward improving pipeline safety.

Question. 4. You criticize OPS for "overextending their scope of jurisdiction" to beyond the "master meter" and to "service lines" for gas distributed in high rise buildings. You also admit that NY State would not be willing to extend its jurisdiction to cover these systems.

(*a*) Who should assure the safety of these systems if neither the federal or state governments do it?

(*b*) Is it better to have no standards applicable to these systems than to have minimum standards that are not enforced?

Answer 4. (*a*) Gas distribution systems "beyond the master meter" must be broken down into two categories for consideration. The first category is the systems (including what OPS defines as service lines) which are found in such as high rise buildings carrying gas to delivery points for lessees located in the upper floors are one. This piping is all within the structure, is above grade, and the majority of it is within walls and unavailable for inspection in any case. The piping is usually not under the control of the gas utility and state commissions such as ours or even OPS can exercise little effective control over the actions of the owner of the structure. Most frequently local governmental agencies such as city or county building departments have and exercise jurisdiction over the installation of such gas facilities in these structures. But they are usually unable to develop the level of qualified manpower necessary to oversee the safe operation and the preventive maintenance of such gas facilities. With respect to this first category, however, I feel that the most effective safety jurisdiction could be exercised by local government rather than federal or even state government.

The second category for consideration is underground gas distribution systems "beyond the master meter." These systems can be found in such as multi-structure apartment complexes, housing authority developments, government institutions, colleges and universities, etc. There are thousands of such systems in many states including New York. It would be possible to develop a state level safety monitoring program for such systems, but even a minimally effective program would be prohibitively expensive. Today's economic situation is such that we must be extremely cautious of spending programs without some reasonable assurance of commensurate benefit.

Answer 4.(*b*) The present minimum federal standards, and our counterpart state gas safety standards, are in my opinion unenforceable with regard to such systems. Both standards are designed for utility gas distribution systems which are managed and operated by professional gas personnel. They are not intended for and are unworkable for such as a real estate management company or local municipl housing authority who operates a few hundred feet of underground gas distribution system within a garden apartment complex. New standards would have to be promulgated which are designed to be effective for such operators.

It is also my opinion that no standards are as effective as inappropriate standards which are not enforced.

Question. 5. You cite several areas where NY State's standards are higher than the federal standards. Have you petitioned OPS to adopt the higher standards?

If so, what was the response?

Answer 5. We have not petitioned OPS to adopt any of our higher standards. To do so would be inconsistent with our opinion that each state should have the flexibility of designing standards that are properly applicable and effective for the variable conditions within that state such as population density and character. One of our main problems with the minimum federal standards is that they must be designed to the lowest common denominator. That is they must be equally applicable in a desert hamlet in Arizona as well as in Chicago or New York City. We should not then, attempt to impose our standards, which are tailored to New York State, or other states whose requirements may be different.

Question 6. What is the size of your staff responsible for adopting and enforcing gas pipeline safety standards?

Answer 6. Our present pipeline safety staff is composed of 26 technicians (para-professionals) and four engineers.

Question 7. In your prepared statement, you criticized the DOT standards for interstate lines as "minimum" standards "that are not sufficient for many areas of New York." Is there any reason why DOT could not promulgate minimum requirements which prescribe varying degrees of safety depending on population densities, construction and industrial activity, terrain and soil conditions?

Answer 7. My response to your question # 5 covers this to some degree. But further, it is my opinion that it would be virtually impossible for DOT to develop a variable set of standards with the variables keyed to the type of physical and social parameters that would be necessary to make such standards effective in every part of every state. This flexibility has to be the responsibility of the state agents of OPS, possible under a monitorng type of control by OPS.

Question 8. Are there pipeline companies whose interstate pipelines exceed the federal requirements?

Answer 8. We no longer have the records, but my recollection is that the design of most or possibly all of the interstate pipelines in New York State exceed the federal standards. This is because our standards existed first and they were more stringent than the federal minimum standards.

Senator HARTKE. Mr. Barnum.

STATEMENT OF HON. JOHN W. BARNUM, DEPUTY SECRETARY OF TRANSPORTATION—Resumed

Mr. BARNUM. Yes, sir.

Senator HARTKE. Yes, sir. All right. The committee summarized the data which you submitted on your enforcement program and the summary is that since 1968 the Federal Government has brought only 68 enforcement actions; that is, in about 7 or 8 years. Of that number, 54 reached the penalty stage and 34 had a civil penalty of less than $1,000.

In the 7 years, a total of $93,510 has been assessed; and out of that amount, $2,150 has been collected.

Of the 68 enforcement actions initiated, more than 61 percent were for failure to file an annual report. Given this record, do you think that any company which is subject to regulation under the act really believes the Federal Government is serious about enforcing compliance?

Mr. BARNUM. On the facts you state, I can see why a question might arise in that respect. But I think that on the basis of what we have done in the last several months with respect to reorganizing the Department's activities and in particular establishing field forces to provide the capability of conducting field inspections, and enforcing in the field and not just reviewing the paper records in headquarters, the industry had better realize we do indeed intend to enforce our regulations.

Senator HARTKE. In other words, what you are saying to me is really that they can anticipate a better record of performance with the reorganization; is that fair?

Mr. BARNUM. I think they can, and I think they would be very wise if they did anticipate exactly that.

Senator HARTKE. How do you evaluate the degree of compliance, generally speaking, by the industry with the gas pipeline safety regulations? From your analyses, we determine that in 1973 the States brought a total of 79 enforcement actions. In 1974, they brought 98.

Mr. BARNUM. It is very difficult to assess a degree of compliance by a total of inspections and occasions on which deficiencies were found per inspection. I think it is a question of measuring the numbers of inspections, the number of operators inspected, looking to see where the emphasis is placed on the regulations for which violations are sought, and indeed, being sure that you are inspecting for possible violations of real consequence, not just the paper-filing type of violations, but possible violations of the construction standards. The question raised this morning concerning depth of a pipeline, for example, is the kind of failure to comply with the regulations that could have disastrous consequences to which you made reference in your opening statement.

Senator HARTKE. In your answers to our prehearing questions which we submitted to you, you indicated that the Office of Pipeline Safety has adopted a compliance program under which violations of regulations are cited but no penalty is assessed. Then you say this approach to enforcement was developed due to the lack of OPS compliance personnel.

In other words, is that going to be corrected? Do you really believe the lack of staffing had an adverse effect upon your compliance effort?

Mr. BARNUM. I don't think there is any question about that. Furthermore, the fact is that we did not have a field organization which likewise had an adverse effect upon our ability to effectively enforce in the field where the possible problems would arise.

I think our having gone last year to an increase in total manning and specific increases in field force—a total of 15 not 12, as the most recent witness testified—will have a salutary effect in this respect.

Senator HARTKE. Currently only 23 States are agents of the Federal Government for these lines. Who is responsible for the inspection in the other 27 States?

Mr. BARNUM. We are, sir.

Senator HARTKE. And since the States act as agents for the Federal Government in purely a voluntary capacity, what is there to assure that adequate attention is being given to the interstate lines?

Mr. BARNUM. Again that is a question of our making sure that our enforcement activities provide both the incentive and the monitoring quality that a good regulatory program should include.

Senator HARTKE. In those other 27 States, do you really do what Mr. Bonner says, "Nothing"?

Mr. BARNUM. No; I don't think that's true. It's true that in the State of New York there is a very sophisticated program for intrastate pipeline regulations and inspection. I am very proud of that as a New Yorker myself, and I don't think that the testimony from New York is really indicative of what is going on in the rest of the Nation.

Senator HARTKE. Mr. Bonner says the fact that you have not had bad results in New York is probably happenstance. I would hate to happenstance us into nationwide catastrophe here.

Mr. BARNUM. I don't think that either he nor we rely on happenstance to obtain pipeline safety.

Senator HARTKE. What really happens in these other 27 States? Is there really any inspection done?

Mr. BARNUM. Yes; the operators are inspected in those States.

Senator HARTKE. I wonder if we couldn't take a look at that, Mr. Barnum, and have somebody give us a report about how many inspections are done and submit that for the record because that is not in the report, is it?

Mr. BARNUM. I asked that question in preparation for this hearing, and I was advised that out of some 405 operators that are subject to inspection obligations, we have in fact inspected approximately 300. Those are the principal operators that have been inspected.

	Number inspected	Total operators
Interstate operators under OPSO jurisdiction	69	132
Intrastate operators under OPSO jurisdiction	227	273
Total operators under OPSO jurisdiction	296	405

Senator HARTKE. Do you inspect the records or the pipeline itself?

Mr. BARNUM. Both.

Senator HARTKE. Both?

Mr. BARNUM. In the case of Alyeska Pipeline, we are very much involved in physically working with the group that is installing the pipeline.

Senator HARTKE. I have witnessed several explosions, one which just by happenstance wiped out four houses in one place and by the grace of God all of the people in the four houses just happened to be gone. All they did was lose their houses and possessions. But you know, the NTSB investigations say that in most of the cases, as I understand, there is not even operator compliance by cutting off the gas at the time the leaks are discovered. That would indicate to me that we are playing with a hope rather than reality here.

Mr. BARNUM. Well, I think, Mr. Chairman, you should recognize that we are concerned here with an industry that has known from the outset that they were working with a very dangerous commodity and they have been very conscious of the problems that transporting that commodity in pipelines presents both from the public image point of view, from a liability point of view, and, indeed, from the point of view of the future of the industry. It has been an industry that has been very responsive to that public responsibility on the whole. I was aware of this prior to my assuming my present position with Government where from time to time I did work as counsel for a pipeline company. I was quite aware at that time of these serious concerns on the part of top management for constructing their pipelines and maintaining them in a way that would be in the public interest.

I found the same thing when I come to the Department of Transportation. The pipeline community is very responsive to the sugges-

tions that we make, and I don't think that the excellent record that the pipeline industry had is based on happenstance. I think it is due to a good deal of determination on the part of the industry and on the part of Government to make that fatality record go down as it has over the last several years.

Senator HARTKE. The problem as I've been told, is that it is not the ones that are safety conscious, but the people who are not pushing that hard that present the problem. So the net result is that you get a person, an operator out here with a good safety approach and he frequently gets caught with regulations which are imposed on them simply because of the fact there was not good compliance by the other segments.

Mr. BARNUM. And this is often a function of the size of the company that we are talking about. It is more often the small operator, not through design not to comply with regulations, but because of his organization, or budgeting or staffing, who is unable to come up to the same performance standards as other companies.

Senator HARTKE. In line with that whole operation, in this new bureau that you have, the Materials Transportation Bureau, in which the OPS will be involved, there is no public counsel for the Office of Pipeline Safety; isn't that correct?

Mr. BARNUM. No public counsel?

Senator HARTKE. Well, there is no counsel, pardon me—I didn't mean public counsel—specifically assigned there, no counsel. Under the new setup there will be no counsel specifically assigned to this operation; isn't that correct?

Mr. BARNUM. That is not quite correct.

As a result of my own experiences as the general counsel in the department working with the OPS when it was in the office of the assistant secretary, and as the person in the department principally responsible for establishing this materials transportation bureau and talking with the management, the operative and the legal people, we determined that the best thing to do was to continue to service the materials transportation bureau from the legal counsel point of view out of the office of the general counsel. An assistant general counsel is charged with oversight, operational, and legal advice for both hazardous materials and pipeline safety. We anticipate that there will be two lawyers under that assistant general counsel assigned specifically to materials transportation bureau problems.

So although it does not appear separately on the materials transportation bureau table of organization, it is in fact a discrete element within the office of the general counsel assigned to support the MTB.

Senator HARTKE. How many other assignments does he have and how will they affect his other duties?

Mr. BARNUM. This is a function of what work is on the table. If that particular individual has priority work in one part of the bureau, that will come first. All of his work will essentially be the work of the MTB.

Senator HARTKE. We are talking about the question raised by Mr. Jennings in which he talks about the proposed change in the amendments and in which he deals with this problem of assignment of personnel and having to split authority and the question of policy responsibility.

How do you reply to that?

Mr. BARNUM. Those, of course, were remarks which were in his prepared statement. I don't think he made those statements here this morning.

Senator HARTKE. No; he did not but I thought that was an appropriate part of his statement.

Mr. BARNUM. It may be that in discussions with people in the department in the last several days he has had our rationale explained and I would be pleased to explain it to you.

In establishing the materials transportation bureau as an operating agency, and getting over what had long been a problem of having an operating entity reporting to a staff officer under the secretary, namely, the assistant secretary, yes, it was first desirable to establish the entity to perform the regulatory and enforcement materials transportation functions of both hazardous materials and pipeline safety generally.

It was simultaneously desirable to retain an oversight and policy function within the office of the secretary just as there is with respect to any of the other operating administrations which have safety, environmental, or any other type of effect on the transportation system or the Nation generally.

There is, for example, in the office of the assistant secretary for environment, safety and consumer affairs, an office of safety. The director of that office is charged with oversight for all of the safety programs in the Federal Aviation Administration, the Federal Highway Administration, the National Highway Traffic Safety Administration, the Federal Railroad Administration, and for any other safety activities that go on within the operating administrations.

In order for the secretary and me to have the opportunity within house, within the department, to have oversight capability just as you perform with respect to the department, it is in our judgment desirable to have a staff officer, such as the assistant secretary through the director of the office of safety affairs, in a position to advise us concerning how well the operating administrations are doing in a particular area, whether it be safety, environment, or otherwise. They don't have a line function, they don't have any authority to tell the office of pipeline safety operations what to do, but they can tell the Assistant Secretary and me where they think OPSO should be putting their manpower. They have the opportunity to comment on budget recommendations, and it gives the secretary and me a much better handle on what is going on in the particular area.

Senator HARTKE. Don't you really add another layer of decision-making there? Isn't that what it amounts to?

Mr. BARNUM. No. I think we have eliminated a layer of decision-making. That is one of the principal points in establishing the MTB. Heretofore, the office of pipeline safety reported to the assistant secretary, who reported to the secretary and me.

Now we have the Materials Transportation Bureau, which has a line authority with respect to pipeline safety, reporting directly to the Secretary and me, and its discrete areas of expertise are all related to the transportation of hazardous materials whether it be in the context of hazardous materials itself or in the area of pipeline safety. What we have done is split the staff and line responsibility, thereby clarifying just where staff responsibility comes and where line responsibility comes.

Senator HARTKE. I see it in a different light than what you are talking about and that this comes down into a straight line type of organizational chart that you have. Really, you have the OPS who reports to the Materials Transportation Bureau or whatever that board is——

Mr. BARNUM. Bureau—MTG.

Senator HARTKE [continuing]. Who in turn reports to the assistant——

Mr. BARNUM. No. The MTB reports to the Secretary and me.

Senator HARTKE. I know but as far as safety policy, this is sort of an outside review board, isn't it? The Assistant Secretary?

Mr. BARNUM. No, the Assistant Secretary's Office of Safety Affairs has exactly the same oversight with respect to safety as his Office of Environment has with respect to the environment. All the activities in the operating administrations are reviewed, priorities recommended to the Secretary and then the Secretary would discuss them.

Senator HARTKE. When I hear the words "reviewed and recommendations made to the Secretary," I hear another layer.

Mr. BARNUM. No, two discrete channels is what you should hear.

Senator HARTKE. Yes, I hear you.

I have other questions but there is a policy committee meeting underway and I have to go. I'll just submit these questions to you, and I would appreciate it if you would answer them for the record.

In the meantime, I hope we don't have some explosion someplace.

Mr. BARNUM. Thank you, Mr. Chairman.

[Whereupon, at 12:23 p.m., the subcommittee was recessed.]

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

THE DEPUTY SECRETARY OF TRANSPORTATION,
Washington, D.C., October 24, 1975.

Hon. VANCE HARTKE,
Chairman, Subcommittee on Surface Transportation, Committee on Commerce, U.S. Senate, Washington, D.C.

DEAR SENATOR HARTKE: In response to your letter of September 30, 1975, transmitting a series of questions for inclusion in the Natural Gas Pipeline Safety Hearing Record, I have enclosed answers to each of the questions you transmitted. Also enclosed is the transcript of the hearing proceeding containing my editorial revisions.

I appreciate the opportunity to have appeared before your Subcommittee to report on the Department's gas pipeline safety activities, and I hope that the answers to the questions are responsive to your needs.

Sincerely,

JOHN W. BARNUM.

Enclosures.

TECHNICAL ADVISORY COMMITTEE

Question 1. Several weeks ago, the Committee sent a survey questionnaire to current and former members of the Technical Pipeline Safety Standards Advisory Committee. The members of the Advisory Committee generally concluded that the committee has been effective and useful. Do you agree and if not, what changes in the advisory committee can you suggest?

Answer. We agree that the Committee's participation in the Department's gas pipeline safety rule making process has been effective and useful. The Committee's regulatory experience and engineering expertise provide a valuable source of both technical and practical advice on the appropriateness of proposed gas pipeline safety standards.

Question 2(a). The survey included a question regarding whether or not the frequency of meetings were adequate to properly review and propose standards.

(a) 59% of the survey respondents indicated that the number of meetings held by the advisory committee is inadequate. Why did the committee meet only twice since 1972?

Answer 2(a). The Committee has met only twice since 1972 because two meetings were sufficient for the Committee to review and report on the rule making proposals presented for its consideration. The Committee will meet again in November 1975. It is anticipated that more frequent meetings will be held in the future to match the needs of our regulatory program.

Question 2(b). The Act requires the Secretary to consult the Advisory Committee prior to the promulgating of amendments or standards. In 1970, the Committee met 3 times, 1971 and 1972, it met once each year, it failed to meet at all in 1973 and it met once in 1974. Does the decreasing frequency of meetings since 1969 mean that there has been few or no new standards or revision of existing standards by the Office of Pipeline Safety?

Answer 2(b). The frequency of meetings since 1969 does not indicate that there has been few or no new standards or revisions of existing standards. Since 1969, the Federal gas pipeline safety standards have been amended 22 times. Significant among these amendments are those providing new standards for corrosion control (June 1971), LNG facilities (Oct. 1972), marking pipelines (March 1975), and odorization of gas in transmission lines (May 1975). Completed and on-going contract studies will be utilized to develop future additions or revisions to the Federal gas pipeline safety standards. They include: (1) study of the technology for transporting, transferring, and storing LNG, (2) study of the technology used in transporting highly volatile corrosive liquids such as LPG, (3) study of the practices in using plastic materials in gas pipeline facilities, (4) study of odorization of natural gas, (5) study of offshore pipeline practices, (6) study of hydrogen stress cracking and hydrogen embrittlement, and other areas of important pipeline technology.

Question 3. A question that was asked of the Advisory Committee members was, "How often were you consulted on pipeline safety matters by OPS, other than at Committee meetings?" The results showed that while 60% of the industry members replied that they were consulted "frequently," only 15% of the public members so responded, and no government member responded that he was consulted "frequently." In fact, 83% of the government members felt they were consulted "infrequently."

(a) How do you explain this greater dependence on advice from industry members than from government and public members?

Answer 3. The type of additional information most often requested of Technical Committee members concerns the current state-of-the-art in operating a gas distribution or transmission system. Requests involved methods used for safe operation and details about equipment and its effectiveness. When OPS has need for consultation or additional technical information of this nature from the pipeline industry, no more appropriate source exists than the industry members on the Committee having current operating experience.

Question 4. Our survey also asked for the committee members' comments regarding the State enforcement programs. Two-thirds of the public members were unable to offer any comments about the program.

(a) Explain the criteria used in selecting the public members of the advisory committee?

Answer 4(a). The criteria used in selecting public members of the Committee, as well as the government and industry members, have been those set forth in Section 4(a) of the Act (49 USC 1673(a)), as follows:

"* * * each [member] * * * shall be experienced in the safety regulation of the transportation of gas and of pipeline facilities or technically qualified by training and experienced in one or more fields of engineering applied in the transportation of gas or the operation of pipeline facilities to evaluate gas pipeline safety standards * * *".

Question 4(b). How do you account for this lack of understanding by these public members of the State enforcement program?

Answer 4(b). The Act provides that the Committee shall consider the technical feasibility, reasonableness, and practicability of all safety standards proposed by the Secretary. It may also propose safety standards for consideration by the Secretary. Because the Committee's focus is on the technical aspects of the Federal regulatory program, the members have been less concerned with State enforcement practices.

OFFICE OF PIPELINE SAFETY

Question 1(a). How has the jurisdictional dispute between the DOT and the Department of Interior with respect to pipelines on the Outer Continental Shelf and other public lands been resolved?

Answer 1(a). Resolution of the jurisdictional dispute regarding the prescription and enforcement of safety regulations for pipelines on the Outer Continental Shelf has not yet been completed. The Administration expects that an agreement resolving the problem will be completed in the very near future. You will be advised when that agreement has been finalized. Meanwhile, DOT has proposed amendments to its liquid and gas pipeline regulations to better assure the safe operation of offshore pipelines (40 FR 43740, Sept. 23, 1975; and 40 FR 45192, Oct. 1, 1975).

Question 1(b). The Deepwater Port Act required this to be resolved last June, when you submitted a report to Congress. You said in that report that this would be resolved September 1. Why hasn't this matter been settled?

Answer 1(b). The two Departments have been unable to reach agreement as yet because each Department strives to carry out its statutory responsibilities to the fullest in an area of overlapping jurisdiction. However both Departments recognize the need to avoid duplication of regulatory efforts. The area of disagreement between the two Departments as to the proper allocation of functions has been considerably narrowed and as stated above an agreement is expected in the very near future.

Question 1(c). Do the regulations for offshore pipelines currently include requirements for design of offshore platforms? Do they cover repair requirements of underwater pipe? Do they cover abandonment and inactivation of offshore pipelines?

Answer 1(c). The DOT regulations for offshore pipelines do not include requirements for the design of offshore platforms. The Department will let a contract in the near future to study offshore pipeline safety practices for the purpose of providing the Department with an appraisal of existing practices and the need for additional new or amended regulations. The study will also identify and recommend additional research programs to advance offshore pipeline safety. It is anticipated that this study will be completed by the end of 1976. If that study regarding offshore safety problems shows a need for platform design requirements, an appropriate notice of proposed rule making will be issued. The regulations now contain requirements for the repair of gas and liquid pipelines located offshore and for the abandonment or inactivation of offshore gas pipelines.

Question 2(a). Both DOT and the Federal Power Commission claim jurisdiction over LNG facility siting. Explain how these two agencies coordinate their efforts in this area.

Answer 2(a). While Section 2(4) of the Natural Gas Pipeline Safety Act (Act) prohibits the Secretary from prescribing the exact site of a natural gas pipeline facility, site selection is affected by increasingly stringent safety requirements based on proximity to occupied areas. Also, in the case of an LNG facility at a marine terminal, various regulatory requirements of the Coast Guard relating to vessels and port safety may influence a proposed location. Further, siting is affected by conditions which the Federal Power Commission (FPC) attaches to certificates issued under the Natural Gas Act based on safety and environmental grounds. With respect to coordinating activities, Section 7 of the Act requires the Secretary to consult with and advise FPC before establishing a safety standard or acting upon application for a waiver that would affect continuity of service. Also, as required by Section 13(b) of the Act, the Secretary from time to time furnishes FPC information on the safety of materials, operations, devices, or processes of natural gas transportation and pipeline facilities. As authorized by Section 13(c) of the Act, the Secretary has also consulted with FPC on matters relating to enforcement of the Federal gas pipeline safety standards.

Question 2(b). Is legislation needed to clarify the jurisdiction over LNG facility siting?

Answer 2(b). Notwithstanding the conditioning authorities mentioned in answer to Question 2(a) above, no Federal agency now plans and designates the proper site for an LNG or other hazardous material facility.

The degree of public concern and appreciation for the potential effects of an incident involving certain hazardous materials varies in different parts of the

country. Although siting is subject to State or local zoning controls, we are not satisfied that there should continue to be exclusive reliance on this arrangement. The effects of an incident at a facility or within its transportation related approaches may extend far beyond the geographic jurisdiction of the State government or local zoning authority. There is little likelihood that State or local zoning bodies acting autonomously will be able to address this matter in a manner satisfactory to the national interest.

A national policy on the siting of LNG facilities should be directed towards:

Reduction of risk to the public,

Orderly industrial growth,

Efficient regional distribution of critical products, and

Preservation of certain areas for human, rather than industrial use.

Such a national policy should provide a mechanism or guidelines for equitable determination of sites of those hazardous materials facilities by the Federal government working in concert with State and local government and the private sector.

At the present time, the Administration is evaluating the policy relating to siting of LNG facilities and ascertaining the most effective methods for implementation of a national policy. A decision on this matter is expected in the near future and a request for appropriate additional legislation will be made to implement that decision, if necessary.

Although it is LNG which has received widespread public attention in the recent past, LNG is only one of several similarly hazardous materials whose handling, storage and transportation may involve serious risk to public safety. Consequently, we believe that it may also be appropriate to specifically identify other materials which pose similar, equal or greater risks to public health and safety and consider whether a national policy should be developed for the siting of facilities handling or storing those materials.

Question 2(d). The Port of Rotterdam in the Netherlands has segregated LNG facilities from other port facilities due to the several safety problems related to LNG. The LNG facility is a completely controlled facility. Should we be segregating the LNG facilities?

Answer (d). Segregation of LNG facilities by appropriate spacing between other plant processes or other port facilities is a normal design feature to compensate for the inherent risks in the handling and storage of LNG. The present regulations contain spacing criteria prescribing the distance between LNG facilities and adjacent property lines in order to minimize the hazard resulting from a failure of an LNG facility. The proposed revision of those regulations, based on a recently completed contract study, will continue to prescribe spacing requirements.

Question 2(e). With respect to LNG siting, should governmental entities be selecting LNG sites and regulating safety from a "systems" approach or should we allow industry to select sites and regulate for safety after that site has been selected?

Answer. DOT regulations provide for the safety of an LNG facility by requiring a combination of precautions including spacing, type and design of facility walls, impounding areas, and insulation of impounding areas. However, as discussed in answer to Question 2(b) above, we believe that a systems approach which would determine the eligibility of suggested sites for facilities handling LNG and other similarly hazardous materials is desirable.

Question 2(f). In October 1972, OPS adopted an LNG storage and handling regulation by incorporating by reference NFPA Specification 59A. In promulgating this standard, OPS said it was "adopting the NFPA Standard only as an interim measure while developing permanent regulations specifically applicable to LNG facilities." What has been done during the last three years?

Answer 2(f). During 1973 and 1974, OPS conducted a contract research study to determine the current state-of-the-art in technology and current practices for processing, transferring, and storing LNG. This research was necessary to provide a sound basis for the promulgation of more specific Federal LNG regulations. Also, in 1974 and 1975 OPS reviewed other technical data and conferred with institutions concerning new developments. Based on this contracted research and other relevant information obtained, we expect to issue soon a notice of proposed rule making to deal comprehensively with the potential safety problems associated with pipeline transportation and storage of LNG.

Question 2(g). To your knowledge, does the Administration need to submit proposed legislation to remedy this conflict?

Answer 2(g). The Department does not have authority to make site determinations. The problem that exists between DOT and FPC concerns the imposition of safety requirements. In many cases, the FPC in exercising its authority in approving site applications under the Natural Gas Act imposes safety conditions on applicants which are at variance with the requirements of the Federal gas pipeline safety standards. The Administration's proposal, introduced as S. 2183, would remedy this jurisdictional overlap by amending Section 7 of the Act to prohibit FPC from attaching to the issuance of certificates conditions that applicants comply with safety standards other than those prescribed by the Secretary of DOT.

ENFORCEMENT AND COMPLIANCE

Question 1. In discussing the level of staffing of the OPS in your responses to our pre-hearing questions, you state, "The basic program has been directed to responding to immediate demands." Does this mean that you have been able to do little more than "put out the fires" and that not much emphasis has been placed on prevention of pipeline accidents?

Answer 1. No, the "immediate demands" referred to were those of establishing basic Federal safety regulations and a limited enforcement program, both directed toward accident prevention. Early staffing did not allow a more in-depth program. Now authorized staffing of the field forces, completed on June 30, 1975, permits nationwide coverage of the industry for enforcement purposes. If the additional personnel requested in the FY 1977 budget are authorized, more attention can be given to offshore enforcement, program analysis, planning, and examination of alternative solutions to safety problems.

Question 2(a). Once a State is certified under the State program, to what extent does the Federal government become involved in assuming gas pipeline safety within that State?

Answer 2(a). If a certified State agency has jurisdiction over all intrastate gas operators within the State, then OPSO monitors the manner in which the State agency conducts its gas pipeline safety program, including the adequacy of its inspection of those operators. If a certified State agency does not have monitoring the agency's program, the Department is responsible for enforcing intrastate operators not under the State agency's jurisdiction. The monitoring of a State agency includes review of program records and procedures used in conducting operator inspections and recording the frequency of those inspections. State personnel are usually accompanied on a routine operator inspection to review the agency's inspection methods.

The Department is further involved with intrastate operators by independently investigating pipeline failures and facilities alleged to be hazardous to life or property.

Question 2(b). Do Federal inspectors participate in inspection of intrastate pipelines within a State?

Answer 2(b). Yes, during evaluations of a State's compliance program, OPSO representatives join the State's representatives in evaluating gas pipeline operators under the State's jurisdiction. Any safety standard violations found are discussed with the State agency to assure that the operator is required to take appropriate corrective action. In those eight States containing municipally operated gas pipeline systems over which the States have not assumed jurisdiction, OPSO field forces exercise inspection responsibilities.

Question 2(c). Your 1974 Annual Report indicates that 27 State agencies were monitored in 1974 to determine the effectiveness of their gas pipeline safety activity. What is done when OPS finds an inadequacy in the State program?

Answer 2(c). When a State agency is monitored and an inadequacy is found in the way the agency conducts its gas pipeline safety program, a letter is sent to the State agency describing the inadequacy and calling for a schedule for its correction. OPSO then maintains close contact with the State agency to assure that the correction is made. This contact includes frequent telephone conversations as well as follow-up visits by OPSO personnel to States where serious inadequacies have been noted.

Question 3(a). A report prepared January 22, 1974, for Prince Georges County, Maryland, complained that the OPS and Maryland Public Service Commission limit their enforcement activities to "the collection of data and monitoring of incident reports submitted by gas companies." Is this type of enforcement by a

State agency common under Section 5 of the Act and do you believe it is effective in assuring compliance with the Act and its regulations?

Answer 3(a). Reliance on this type of passive enforcement is being reduced as States are being encouraged and assisted by OPSO in conducting more active pipeline safety programs. While the enforcement activities of the various State safety programs may differ, most State compliance programs are now directed more toward inspecting to assure compliance with the design, construction, operation, and maintenance requirements, with a lesser emphasis on the reporting requirements.

Question 3(b). In January, 1975, it was revealed that Maryland has only one pipeline inspector for the whole State. When asked by a WASHINGTON POST correspondent about this, Mr. Caldwell replied, "I feel more staff is needed. Obviously, one person is not adequate." What can OPS do in such a situation and have you taken any action to correct this inadequacy?

Answer 3(b). We have advised the Maryland Public Commission and its staff that we believe more than one full time inspector is needed for a thorough gas pipeline safety program in Maryland. That Commission ranks very low in the number of gas customers in the State.

The Act provides the Secretary a financial means for encouraging a State agency to enlarge its staff. Through the grant-in-aid program, the Department may pay up to 50 percent of the cost of a State's program. State agencies with larger staffs currently receive larger payments.

Although encouraged to do so, Maryland has not elected to take maximum advantage of the Federal grant program. Maryland has consistently been allocated the full amount of its grant requests since it began making applications for aid in 1972 (1972–$11,780; 1973–$8,712; 1974–$9,115; and 1975–$12,820). However, in none of these years have Maryland requested the maximum amount of Federal funds available to the State for its program.

In spite of Maryland's reluctance to take greater advantage of the present federal incentive program the Department remains concerned about the merits of funding more than 50 percent of the cost of State personnel for the reasons stated in our letter to Chairman Magnuson commenting on S. 2042.

Question 4. In your 1974 Annual Report, you cited as an "Outstanding Problem" the fact that 8 States do not have jurisdiction over municipal gas system operators and in such cases, responsibility for administering a part of the intrastate gas pipeline safety program remains with the Federal government. Does OPS actually engage in any inspection, compliance and enforcement activities in such States? When there is a pipeline failure, does OPS sample or require sampling of other points along the failed pipeline to determine whether preventive maintenance may be needed? How many samples are required now and how far down the line?

Answer 4. Yes, OPSO engages in inspections, compliance, and enforcement activities of municipally owned pipeline systems that are not subject to State agency jurisdiction. OPSO has inspected 227 of 273 such operators in the country. The operators are required by the Federal regulations to establish procedures for analyzing accidents and failures, and to take appropriate action concerning failures, leakage history, corrosion, and other unusual operating and maintenance conditions for the purpose of minimizing the possibility of recurrence. The testing of other points along the failed pipeline is done only when the analysis of the failure indicates that such action is necessary. Determinations as to the need and types of preventive maintenance are largely based on technical data other than metallurgical examinations of failed pipe samples.

Question 5. You indicate that your field inspection force responds to "inquiries by the interested public and local governments." What has been the volume of these inquiries? Does the field inspection force only respond to these inquiries or does it act on its own initiative? Please provide a breakdown of this for the record.

Answer 5. When our Office indicated that the field inspection forces are responding to inquiries by the interested public and local government, we were referring to routine telephonic and letter responses to inquiries concerning information about pipeline safety matters. We did not mean that those responses required a field inspection.

Regarding these routine responses, the Houston Regional Office, which was the only field office in operation during all of 1974, made 190 contacts with government agencies and 143 contacts with the general public. Records are not kept of the number of inquiries which resulted in a field inspection. However, these have been minimal. The field inspection forces respond to such inquiries

requiring a field inspection in addition to conducting their own program of inspecting gas operators and investigating pipeline failures.

MISCELLANEOUS

Question 1. The greatest single threat to pipeline safety is probably subsurface damage.

(a) What has OPS done in this area to mitigate damage to pipelines caused by excavation and construction activities?

Answer 1. We have taken several actions to assist States and local governments in their efforts to prevent excavation-related damage. In January 1972, OPS provided State and local officials and other interested persons a model statute which, if enacted, would reduce the likelihood of damage to buried pipelines. It was also presented along with related public commentary at a National Transportation Safety Board symposium on excavation-related damage in April 1972. We have also supported the related efforts of the Committee on Suggested State Legislation of the Council of State Governments, the American Public Works Association, the National Utility Contractors Association, and the American National Standards Institute. In November 1974, the Secretary of Transportation forwarded to the Governors of the States and the Mayor of the District of Columbia a revised model statute better designed to protect underground pipelines and utilities from excavation damage. The Department is initiating a contract study to evaluate the effectiveness of pipeline and utility damage prevention programs conducted throughout the country. Based on the findings of that study, we will pursue a number of action programs to reduce damage incidents. Finally, sections in the Federal pipeline safety standards on depth of cover, underground clearance, line marking, patrolling, surveillance, emergency plans, and other subjects require procedures designed to provide protection against such damage. A recent amendment to the standard on pipeline markers encourages development of local programs for preventing interference with underground pipelines.

Question 1(b). So called "one-call" programs in some areas have been successful in reducing subsurface damage. Do you believe such programs can work if they are voluntary? If so, what has OPS done to support such programs? How prevalent are these programs?

Answer 1(b). Yes, we believe such programs can be effective if they are voluntary. However, we feel that they will be more effective if established by State or local statutes. The Department's model statute is intended, among other things, to foster the adoption of statutory "one-call" programs. State laws patterned on 1972 model statute have been enacted in Michigan and Maryland, and in both States very active "one-call" programs are widespread and growing throughout the country, and particularly effective ones are in Michigan; the metropolitan Washington, D.C. area; Rochester, New York; Houston, Texas; and Memphis, Tennessee. Several West Coast localities in the Pacific Northwest and Los Angeles areas have active underground construction coordinating bodies.

Question 1(c). Do any jurisdictions have a "one-call" system which is mandatory before undertaking excavation and construction activities? How have these programs worked?

Answer 1(c). The State laws of Michigan and Maryland which require notification of planned work by the construction contractor and a response from the underground utility are met by the "one-call" system. A Fairfax County, Virginia, ordinance similarly provides that the "one-call" system meets the "notification" and "response" requirements in that county. From the data OPSO has obtained, we believe that the mandatory "one-called" programs are effective. The contract study should provide us important additional information on a nationwide basis which will help OPSO in its safety regulatory programs and also help the pipeline industry and the construction contractors in their efforts to eliminate pipeline damage incidents.

Question 2. Under the Act, rural gas gathering lines are exempted from the Office of Pipeline Safety's jurisdiction. However, the Department would now have jurisdiction over gathering lines under the Transportation Safety Act.

(a) What work is now being done to determine whether regulations for gathering lines are needed?

Answer 2. Based on the need to provide for adequate safety of all offshore gas pipelines, the Department has proposed to include offshore gathering lines within the coverage of the Federal gas pipeline safety standards (40 FR 45192, Oct. 1, 1975). At this time, the Department does not have enough information to deter-

mine which, if any, of the Federal standards should be made applicable to onshore gas gathering lines outside populated areas. We plan, however, to reexamine the safety needs of these onshore gathering lines.

Question 2(b). Your 1974 Annual Report indicated that in 1970, there were 343 "failures" in transmission and gathering lines; and by 1974 that figure had risen to 460. Can you explain why there has been such an increase and whether transmission lines, gathering lines, or both are to blame?

Answer 2(b). We believe that the increase in the number of *reported* failures on transmission and gathering lines between 1970 and 1974 is due to a greater awareness of the OPSO reporting requirements, which went into effect in 1970. The number of reported failures has been above 400 for every year since 1970. The increase in reported failures is atributable to transmission lines. We believe the increase does not indicate that a greater number of transmission line failures occurred in 1971 through 1974 but rather than a greater number of those occurring were reported.

Question 3. The American Gas Association has begun work on the problem of soil absorption of odorant compound. What role has the Office of Pipeline Safety assumed with regard to this problem?

Answer 3. Since the Act was passed, we have stressed the need for improved performance of odorants through contacts with industry, speeches, correspondence and seminars. In addition, NTSB pointed out in several of its accident investigation reports that odorant filtration was indeed a serious safety problem. We believe that both the OPSO and NTSB efforts were among the primary considerations in the decision by AGA to begin its odorant study. The AGA study, which was initiated this year, is set up in three separate steps that will take three years to complete.

As a result of funding in the amount of $275,000 provided for in a bill sponsored by Senator Beall, we have undertaken four research projects which include the "Study of the Properties of the Numerous Odorants and Their Effectiveness in Various Environmental Conditions to Alert People to the Presence of Natural Gas." This study is to be completed in October and available in November 1975 for distribution. This state-of-the-art study will more clearly define the odorant problem and serve as a guide for a basic research approach. The results of the AGA study and any other research on this problem will be monitored by OPSO and appropriate action will be taken.

Question 4. Several years ago, in hearings on Natural Gas Pipeline Safety, one member of the Technical Pipeline Advisory Committee suggested that a less brittle quality of steel is needed for pipelines. Do you agree? If so, has there been a significant improvement in the quality of steel used?

Answer 4. The Federal safety standards require that material used in pipelines be able to maintain structural integrity under temperature conditions that may be anticipated. To maintain its structural integrity, steel pipe must possess good notch toughness characteristics appropriate for the temperature in which the pipe will operate. Steel pipe with lesser notch toughness characteristics becomes relatively more brittle as the temperature decreases.

In our opinion, the quality of steel available possesses notch toughness sufficient to enable the industry to comply with our performance requirements for the low tempreature environment in which the pipe will be operated.

Question 5. What studies has your office undertaken to determine the effectiveness of gas industry efforts to better inform its customers of the dangers of leaking gas and what to do about it? Do you feel this area of consumer safety is properly protected?

Answer 5. On August 11, 1970, OPS issued a general requirement (49 CFR 192.-615(d)) that each operator establish an educational program to enable customers and the public to identify and report a gas pipeline emergency. Since this was requirement was issued, we have worked to develop more detailed requirements based on experience and additional pipeline safety data. Information was obtained through contacts with gas operators, industry associations, State agencies, and in the joint OPSO/State sponsored industry seminars on pipeline safety. These findings, and information provided by the NTSB, were used to prepare a notice of proposed rule making, detailing more specific criteria to clarify and strengthen operators' emergency plans and educational programs, which was issued on March 10, 1975 (40 FR 13317). As a result of this notice, we expect soon to issue a more comprehensive requirement for public education that will do much to improve this area of consumer protection.

Question 6. In your response to our pre-hearing question 5, you indicated that because of the Trans-Alaska crude oil pipeline and proposed gas pipelines, you plan to promulgate regulations for gas and liquid pipeline transportation in an arctic environment and that these will be proposed for these pipelines in fiscal year 1977. Won't this be too late? Aren't the pipelines being constructed now?

Answer 6. Construction of the Trans-Alaska crude oil pipeline is scheduled for completion in mid-year 1977. Construction of the gas pipeline is scheduled to begin after completion of the crude oil pipeline.

The Federal safety standards for gas and liquid pipelines (49 CFR Parts 192 and 195) are written in performance terms which apply wherever pipelines are constructed, even in an arctic environment. We recognize that in certain cases, more detailed standards applicable to arctic pipelines may be necessary. Yet, before construction of the Tran-Alaska crude oil pipeline, OPSO had no firm basis for identifying areas where more detailed standards might be needed for safety. Nevertheless, in consultation with the Department of the Interior (DOI), OPSO is monitoring the construction of the Trans-Alaska pipeline and recommending adoption of more detailed specifications as the needs arise.

To ensure that all areas have been identified where more detailed safety standards are needed, OPSO in FY 1976 proposes to conduct a contract study of the special construction, testing, operating, and maintenance techniques necessary for pipelines in an arctic environment. Findings of the study, along with experience gained during construction of the Trans-Alaska crude oil pipeline, will be used to develop additional safety standards in areas where the existing standards do not adequately cover the special conditions found in the Arctic. OPSO contemplates that these standards will be completed before construction of the next planned major arctic pipeline.

Question 7. You state that the Department is reviewing the need to amend the Gas Pipeline Safety Act to allow for prescribing the route or site of a gas pipeline facility. Please expand on this.

Answer 7. This question is encompassed by the broad issue of the proper Federal role in facility siting for LNG and other similarly high risk materials, which is discussed under Question 2 relating to the Office of Pipeline Safety.

Question 8. When does the Department intend to appoint a permanent director of the OPSO?

Answer 8. The Department's first selection priority was the appointment of the Director of the Materials Transportation Bureau (MTB), which was recently accomplished effective September 30, 1975. We have delayed somewhat the appointment of the OPSO director, to afford the MTB director an opportunity to participate in the selection of the OPSO director, who will be one of the principal members of the MTB staff. The Department will select the OPSO director in the not too distant future after reviewing the available qualified people both within and outside the Department.

NATURAL GAS PIPELINE SAFETY ACT AMENDMENTS OF 1975

FRIDAY, SEPTEMBER 26, 1975

U.S. SENATE,
COMMITTEE ON COMMERCE,
SUBCOMMITTEE ON SURFACE TRANSPORTATION,
Washington, D.C.

The subcommittee was reconvened, pursuant to adjournment, at 10:05 a.m. in room 5110 of the Dirksen Senate Office Building; Hon. J. Glenn Beall, Jr. presiding.

Senator BEALL. The committee will come to order.

We will continue our hearings this morning on the Natural Gas Pipeline Safety Act of 1968 and S. 2042 and S. 2183.

The first witness is the distinguished chairman of the FPC, Hon. John Nassikas.

Mr. Chairman, we are delighted to have you. We congratulate you on your ability to weather the inclement weather.

Mr. NASSIKAS. Most everything is my fault, including the weather.

Senator BEALL. We will accept the credit for getting it straightened out over the weekend.

You may proceed with your testimony.

Mr. NASSIKAS. Mr. Chairman, to my right is Mrs. Lilo K. Schifter, Office of the General Counsel. Left of me is Lewis A. Brubaker, head of the Transmission Section, Systems Operations Division, Bureau of Natural Gas and highly competent in liquefied natural gas affairs. Daniel Goldstein, Assistant General Counsel, to my far left.

As you suggested, I would like to offer my complete statement for the record. With your indulgence, I will summarize as briefly as I can.

STATEMENT OF HON. JOHN N. NASSIKAS, CHAIRMAN, FEDERAL POWER COMMISSION; ACCOMPANIED BY DANIEL GOLDSTEIN, ASSISTANT GENERAL COUNSEL; LEWIS A. BRUBAKER, JR., HEAD, TRANSMISSION SECTION, SYSTEMS OPERATIONS DIVISION, BUREAU OF NATURAL GAS; AND LILO K. SCHIFTER, OFFICE OF GENERAL COUNSEL

Mr. NASSIKAS. I testified last year before this committee about the jurisdictional conflict between DOT and FPC arising out of the Natural Gas Pipeline Safety Act, and secondly the Natural Gas Act, section 7, particularly. This is really a continuation of that hearing. As I remember, the idea expressed was that we should try to work out our problems as best we could with DOT, and this we did attempt to do. We did not work out the problems, because the working agreement

which I submitted to the Secretary of DOT was not acceptable to them.

With that preface, I might turn briefly to S. 2042, which looks like a good idea. I cover that in two sentences of my prepared statement.

S. 2183 is the bill I'm addressing myself to. I oppose this bill. I oppose it because it would oust the Commission's safety jurisdiction, and would place exclusive regulatory authority under the jurisdiction of the Department of Transportation. I submit the bill would eliminate any safety responsibility by the FPC in certifying a natural gas pipeline or facility to transport natural gas or liquefied natural gas by pipeline under section 7 of the Natural Gas Act.

I think the public should be entitled to a review by our Commission as to whether a proposed project under our jurisdiction will serve the "public interest" or the "public convenience and necessity," so-called, under section 7 and "public interest" under section 3 of the Natural Gas Act by an independent determination as to safety, as one of the relevant factors at arriving at a decision.

The proposed legislation would absolve the FPC from any accountability in the event a project were to be certified and there was subsequent damage to life and property caused by inadequate safety precautions. While vesting exclusive jurisdiction in the Office of Pipeline Safety will reduce the administrative and regulatory burden of the FPC and will also enable the FPC to disclaim any responsibility for safety, I do not think that this is in the public interest.

I believe the FPC should be accountable for safety, in addition to observing the standards as they may be promulgated by the Office of Pipeline Safety.

In a nutshell, the bill says that instead of having minimum standards established by the Office of Pipeline Safety, the Office of Pipeline Safety will establish the standards and will have exclusive jurisdiction.

I submit we should be able to enforce a higher standard, if the evidence before us in a proceeding so demonstrates, in order to provide for the public safety.

The classic case, in my statement I would call it, that relates to what we have done with reference to safety. I point out the Distrigas proceeding in which the Court of Appeals for the District of Columbia held that we do have safety jurisdiction over LNG. I also point out what we did in the Columbia LNG proceeding, which is the import facility at Cove Point, Md., as well as at Elba Island in Savannah, Ga. As to Cove Point, for example, we went into, and I have this in my statement, but we went into very detailed safety considerations for that project.

We reviewed these safety aspects, both as to maritime transport and the berthing of the ships, pier, connecting pipelines with the Coast Guard, which is a division, as we know, of the DOT and also with the Office of Pipeline Safety, the Maryland regulatory authorities, as they relate either to transport or to safety precautions or protection of the environment. We had to observe all NEPA requirements. We were taken to court by an environmental group, and the case was subsequently remanded back to the Commission, and we issued a supplemental order which made our decision final, to observe the requirements of the National Environmental Policy Act.

The only reason that I have at some length pointed out what we did in Columbia and also what regulations we utilized, is that I believe that a specific case may perhaps illuminate what I am talking about in reviewing a certain application for an import of liquified gas under section 7C of the Gas Act.

I don't believe that it would be appropriate protection of the public interest, if the Office of Pipeline Safety were simply to set standards. We would then observe those standards, but have no right to do anything. If we wished to certify we would have to adopt those standards, even though we may find that there are some additional precautions which should be taken.

I think that the rest of my statement speaks for itself. With your indulgence, I will answer questions relating to it.

Senator BEALL. Thank you, Chairman Nassikas.

Do you think it is necessary to segregate LNG ports from other ports?

Mr. NASSIKAS. To have an actual port?

Senator BEALL. Yes.

Mr. NASSIKAS. For LNG imports?

Senator BEALL. Or could it be integrated?

Mr. NASSIKAS. Not necessarily. Certainly, segregation, establishing special berthing facilities or ports or harbors for LNG would minimize the risk of some type of dangerous incident, explosive, or leakage. I don't think it is necessary. I think that adequate precautions can be taken to minimize the risk, although not to guarantee safety, any more than we can guarantee safety as a result of building a nuclear plant up at Calvert Cliffs.

Senator BEALL. S. 2183 comes with the blessing of the OMB. You are opposed. Have you had opportunity to give input to OMB?

Mr. NASSIKAS. OMB is entitled to their opinion. I try, as chairman of an independent agency to coordinate with them in the sense of participating in discussions. Normally, I have said this before—normally, I submit a copy of my statement to OMB for their information, as a matter of courtesy. The thoughts are my own.

Senator BEALL. In fact, you are speaking out in opposition. Did OMB ask for your suggestions prior to their adopting the policy they did?

Mr. NASSIKAS. I am reminded by Mr. Goldstein that we were asked to comment by the OMB on their draft bill. We did comment and our comments to OMB are substantially the same as here, in opposition to the bill.

Senator BEALL. Your point is that you think it would be much better during the certification process to make certain that the desired safety regulations are carried out as a condition of certification. I think there should be a guarantee that these proper procedures be followed as a condition.

Mr. NASSIKAS. We want to set standards more rigid than perhaps generalized standards are capable of doing. Applying a standard to a specific situation involving a specific circumstance in an adversary proceeding on an evidentiary record, is more protective of the public record than simply the standards.

Senator BEALL. What would you do that the Office of Pipeline Safety wouldn't?

Mr. NASSIKAS. If the bill was passed and the office——

Senator BEALL. Under the present law?

Mr. NASSIKAS. Presently, we have prescribed more rigid standards than the Office of Pipeline Safety in at least two cases, and perhaps more—the Tennessee case, Chattanooga case, and there are others that don't come readily to mind.

We have also asked the Office of Pipeline Safety to intervene in our proceedings. I believe to date they have declined to intervene in our proceedings and present their views as part of an evidentiary record.

We do work cooperatively with them. Our staff has received excellent suggestions from the Office of Pipeline Safety, and I think vice versa that our staff has given them suggestions which they have adopted.

If the Office of Pipeline Safety says these standards that they have established are adequate, but we don't agree, as in the Chattanooga case, we go ahead and issue our order. That is under the present law. That is what I believe the present law is, that we have overlapping jurisdiction in this matter.

My solution is to have concurrent jurisdiction, as I have suggested in the bill that I have presented to you as part of my statement, to clarify and make it crystal clear that the FPC in its certificate responsibilities, may determine safety standards that may be more rigid, more protective of the public interest than the standards prescribed by the Office of Pipeline Safety. In some instances there might be some disagreement, although I don't see how a substantive disagreement could arise about trying to protect the public from a hazard, which pipeline transportation is.

I want to emphasize again, Mr. Chairman, from a standpoint of public administration, I believe that an agency should be accountable.

I don't think that the policy of allowing the FPC to simply say, "Well, the Office of Pipeline Safety said this was all right," and then we can say nothing about it, except to reject the certificate—we could reject the certificate and then we don't get gas that we need.

I don't think it is a realistic option.

Senator BEALL. Under S. 2183, don't you think there would be a continuation of cooperation between FPC and DOT?

Mr. NASSIKAS. There would be continued cooperation under 2183, in that the FPC could participate in rulemakings that were instituted through formal proceedings. There is no question about the continuance of cooperation by the FPC lending its full assistance to the Office of Pipeline Safety, if the Congress decided that it was that agency, exclusively, that would set the safety standards.

If you did this, we would cooperate, but I recommend that you do not.

Senator BEALL. Thank you very much.

Mr. NASSIKAS. Thank you, Senator Beall.

[The statement follows:]

STATEMENT OF HON. JOHN N. NASSIKAS, CHAIRMAN, FEDERAL POWER COMMISSION

I am pleased to respond to your invitation to discuss issues of natural gas pipeline safety in relation to the Federal Power Commission's responsibilities under the Natural Gas Act and related statutes, and the proposal on S. 2183 to grant exclusive jurisdiction to the Secretary of Transportaton through the Office

of Pipeline Safety over the safety of natural gas pipeline transportation and facilities, as well as imports of liquefied natural gas.

You have also requested my views concerning S. 2042. The Commission believes that the enlargement of the Department of Transportation's functions primarily in the area of gas leak detection and prevention, as well as to upgrade standards and training for safety inspection at the state level, and for the establishment of utility coordinating councils to prevent excavation damage to underground utility lines and establish research priorities in lead detection, are desirable features and accordingly we favor the enactment of S. 2042.

The Federal Power Commission opposes the enactment of S. 2183 because the bill would oust this Commission's safety jurisdiction and place exclusive regulatory authority for the safety of transmission facilities for natural gas under the jurisdiction of the Department of Transportation. The bill would eliminate any safety responsibility by the Federal Power Commission in certifying a natural gas pipeline or facility for the transportation of natural gas or liquefied natural gas by pipeline under Section 7 of the Natural Gas Act, or the importation of natural gas or liquefied natural gas under Section 3 of the Natural Gas Act.

I believe the public is entitled to a review by this Commission as to whether a proposed project under our jurisdiction will serve the "public interest" or the "public convenience and necessity" by an independent determination as to safety as one of the relevant factors in arriving at a decision.

The proposed legislation would absolve the Federal Power Commission from any accountability in the event a project were to be certified and there was subsequent damage to life or property caused by inadequate safety precautions. If pipelines are responsible for compliance with our regulatory requirements relating to certificate proceedings I believe that there is greater assurance that the public will be protected from hazards or dangers of pipeline transportation and storage than if such pipelines are accountable solely to the Department of Transportation.

S. 2183 is intended to resolve the continuing jurisdictional dispute over interstate natural gas pipeline and associated liquefied natural gas (LNG) facilities safety between the Federal Power Commission and the Department of Transportation. Though I believe it desirable for Congress to resolve this jurisdictional dispute, I do not believe that S. 2183 provides a workable answer.

I want to call your attention to my testimony before the Committee on Commerce on June 14, 1974, on S. 2064, Committee Print No. 93–108, pp. 234–266, where I described the jurisdiction of the Federal Power Commission in the regulation of the importation of liquefied natural gas (LNG) including the safety aspects of the transportation and handling of LNG, and the Commission's authority over the siting, construction and operation of LNG facilities.

FPC JURISDICTION OVER SAFETY REGULATION

As you know, the Federal Power Commission's mandate to engage in safety regulation is derived largely from the Natural Gas Act, as amended, 15 U.S.C. 717, et seq.

Under the provisions of the Natural Gas Act no person may engage in the sale for resale or transportation of natural gas in interstate commerce without a certificate of public convenience and necessity issued by the FPC for the construction and operation of the facilities as are necessary for the effectuation of such sale or transportation. Similarly, authorization must first be received from the FPC before anyone may engage in the importation into or the exportation from the United States of natural gas. The FPC has the authority to attach to the issuance of any such certificates and the rights granted thereunder such reasonable terms and conditions as the public convenience and necessity may require. It is the public convenience and necessity standard of § 7(c) [1] and the

[1] (c) No natural-gas company or person which will be a natural-gas company upon completion of any proposed construction or extension shall engage in the transportation or sale of natural gas, subject to the jurisdiction of the Commission, or undertake the construction or extension of any facilities therefor, or acquire or operate any such facilities or extensions thereof, unless there is in force with respect to such natural-gas company a *certificate of public convenience* and *necessity* issued by the Commission authorizing such acts or operations. (15 U.S.C. 717f(c))

public interest standard of § 3 [2] which have been held to authorize the Commission to impose safety standards on the transportation of natural gas. Under these statutory provisions the Federal Power Commission has long exercised its authority over pipeline safety and conditioned the grant of certificates upon the applicant's compliance with certain safety requirements.

In addition to our responsibility for the safety aspect of any facility in our certification procedure under § 7(c) of the Natural Gas Act and the safety aspects of imports and exports under the "public interest" standard of § 3 of the Natural Gas Act, safety is also a primary concern in the Commission's evaluation of applications under the National Environmental Policy Act (NEPA), 42 U.S.C 4321, *et seq.*

Safety aspects are evaluated during all phases of any proposal: construction, operation (including transportation, unloading, storage and regasification), and routine and emergency maintenance.

In 1968, Congress enacted the Natural Gas Pipeline Safety Act, 49 U.S.C. 1671, *et seq.*, which requires the Department of Transportation, acting through the Office of Pipeline Safety (OPS), to establish minimum federal safety standards for the transportation of natural gas and for the safety of pipeline and appurtenant facilities used in such transportation in interstate and intrastate commerce. Section 3(b) of the Safety Act directs the Secretary of Transportation to establish minimum Federal safety standards applicable to the "design, installation, inspection, testing, construction, extension, operation, replacement and maintenance of pipeline facilities." [3] Since the passage of the Pipeline Safety Act the Federal Power Commission hs made its own independent safety reviews in order to decide what additional safety conditions should be prescribed in addition to those required by DOT.

There is no indication in the Pipeline Safety Act itself or in its legislative history that Congress, by enacting the Natural Gas Pipeline Safety Act intended to curtail the jurisdiction exercised by the Federal Power Commission in the field of pipeline safety. On the contrary, the legislative history of the Natural Gas Pipeline Safety Act is clear in illustrating that the intent of Congress, upon enactment of the Safety Act, was that the Commission has retained authority to implement, in jurisdictional proceedings, safety standards of a more stringent nature than those standards promulgated by OPS:

The general scheme of the act is to provide broad safety powers to the Secretary in gas pipeline transportation. The Federal Power Commission presently has certain safety regulatory authority over interstate transmission lines under the Natural Gas Act. The FPC is required to consider and take action on some elements of the safety of transmission proposals in acting on applications for new or extended authority and it is not intended that this act will diminish the authority and responsibility of the FPC. In order, however, that the FPC not be placed in the position of having to determine whether the construction and operation details of a proposed service conform to the Secretary's standards, an applicant may certify to this effect and the certification will be conclusive on FPC. But if the relevant State or Federal enforcement agency has information that the applicant has violated safety standards in the past (thus possibly calling in question the applicant's compliance disposition) and notifies FPC in writing the certification will not be binding.

It is not intended by the committee that this process of certification of compliance with the Secretary's standards will bar FPC from continuing to consider safety in the same fashion presently does in connection with awarding certificates of public convenience and necessity. (Emphasis added).[4]

Since 1968, therefore, both the Commission and the Department of Transportation have operated in this field and a jurisdictional dispute has developed

---

[2] We are required by § 3 to authorize the import or export of natural gas, and this includes LNG imports or exports, *"unless, after opportunity for hearing, it finds that the proposed exportation or importation will not be consistent with the public interest.* The Commission may by its order grant such application, in whole or in part, with such modification and upon such terms and conditions as the Commission may find necessary or appropriate and may from time to time, after opportunity for hearing, and for good cause shown, make such supplemental order in the premises as it may find necessary or appropriate." (15 U.S.C. 717b)

[3] The term "pipeline facilities" is defined in Section 2(4) of the Safety Act to mean "without limitation, . . . any equipment, facility or building used in the transportation of gas". Section 2(3) of the Safety Act defines "transportation of gas" as "the gathering, transmission or distribution of gas by pipeline or its storage in or affecting interstate or foreign commerce." 49 U.S.C. 1671 (4) and (3).

[4] See the respective House and Senate Commerce Committee reports on S. 1166, the Safety Act bill passed by Congress in 1968: S. Rep. No. 733, 90th Cong., 1st Sess., at 12 (1967), and H. Rep. No. 1390, 90th Cong., 2d Sess., at 34–35 (1968).

between them as to their respective responsibilities for the safety regulation of natural gas transportation and natural gas facilities.

It is undisputed that DOT's Office of Pipeline Safety has authority to promulgate minimum safety standards and regulations under the Natural Gas Pipeline Safety Act with respect to facilities subject to our jurisdiction and such minimum standards and regulations must be met by applicants seeking approval from this Commission for any natural gas facility. But this Commission's authority to determine the safety of the siting and routing of natural gas pipeline and LNG facilities is not limited by the Natural Gas Pipeline Safety Act and, therefore, both the Commission and DOT's Office of Pipeline Safety are charged and maintain pipeline facilities in accordance with Federal and other appli- with safety regulation of these natural gas facilities. The Safety Act, while not completely clear on the extent of each agency's safety jurisdiction provides that an applicant for a certificate under Section 7 of the Natural Gas Act shall certify that it will: "design, install, inspect, test, construct, operate, replace and maintain pipeline facilities in accordance with Federal and other applicable safety standards . . . Such certification shall be binding and conclusive upon the Commission unless the relevant enforcement agency has timely advised the Commission in writing that the applicant has violated safety standards established pursuant to this Act." This procedure was designed to eliminate the need for the FPC to verify an applicant's conformity with DOT's minimum Federal safety standards.

The question that has been the subject of the jurisdictional dispute is whether under the public convenience and necessity standards of § 7 of the Natural Gas Act and under the public interest standard of § 3 of the Natural Gas Act, the safety aspects of a pipeline or an LNG storage tank facility are subject to Commission determination as to whether a higher or different safety standard than imposed by the minimum safety standard prescribed by DOT may be necessary.

The Federal Power Commission and the Department of Transportation have been trying to resolve this continuing jurisdictional dispute over their respective responsibility for safety pertaining to transportation of natural gas through interagency negotiations. The negotiations were prompted by recommendations made in a March, 1974, report on the safety of liquefied natural gas storage by the Special Subcommittee on Investigations, chaired by Congressman Harley O. Staggers of the House Committee on Interstate and Foreign Commerce.[5]

After considerable effort, however, we were unable to secure DOT concurrence in a proposed Memorandum of Understanding which, while it could not have removed statutory conflicts, would have, in our opinion, minimized the likelihood of interagency conflict. The Commission's letter of November 27, 1974, to Congressman Staggers, explaining the results of our efforts to achieve an understanding with DOT is attached for the information of the Committee (Attachment A). While I believe that the built-in conflicts in our respective legislative mandates could be avoided in perhaps every instance by coordination and consultation between FPC and DOT, there is no doubt a legislative solution would provide the most clearcut resolution of this problem. Therefore, the Federal Power Commission favors corrective legislation.

ANALYSIS OF S. 2183 AND FPC'S RESOLUTION OF JURISDICTIONAL CONFLICTS

The solution offered by S. 2183 is to vest exclusive regulatory authority over safety of interstate transmission facilities for natural gas in the Department of Transportation.

The effect of S. 2183 would be to prohibit the FPC from denying or conditioning a pipeline certificate on the basis of safety criteria perceived by the FPC, but not contained in the safety requirements of DOT's Office of Pipeline Safety.

However, S. 2183 is not the only solution to the jurisdictional conflict. I offer the attached draft bill (Attachment B) as a possible legislative solution to the problem of jurisdiction over pipeline safety. My bill proposes amendments to the Natural Gas Pipeline Safety Act and the Natural Gas Act which would clearly

---

[5] OPS, FPC and USCG [United States Coast Guard] should jointly agree on measures to alleviate interagency conflicts within the full range of LNG handling and storage matters, and report on their progress to the Subcommittee. If these agencies are unable to agree, Congress should act to resolve the problem. (*Legislative Issues Relating to the Safety of Liquefied Natural Gas Storage*, Report by the Special Subcommittee on Investigation of the Committee on Interstate and Foreign Commerce, House of Representatives, 93d Congress, 2d Session, March 1974, page 3.)

define the jurisdiction of the Department of Transportation and the Federal Power Commission. The solution proposed by me would preserve the status quo: OPS would still have the authority to promulgate minimum Federal safety standards; and the FPC, when the public interest so dictates, would retain the authority to apply more stringent safety requirements upon a proper showing.

Under the present procedure FPC has never attempted to overrule OPS in the imposition of any safety standard, but has found it necessary on certain occasions to impose safety standards on the siting of pipeline and LNG facilities that were more stringent than those required by OPS. The mandates of the Natural Gas Act and the broad public interest standard impose on the Federal Power Commission a statutory obligation not only to establish safety standards for construction and operation within the site-plant but beyond the facility itself and to consider and provide for the safety of people, property and environmental values in the vicinity of any natural gas facility. I am convinced that these actions by the FPC have been in the public interest. I believe that the FPC is in a better position than OPS to make such decisions, since FPC, unlike OPS, is required to weigh not only the safety factors, but also all economic, market demand and other broad public interest factors related to each of its certificate decisions.

The FPC's draft bill also proposes to amend Section 3 of the Natural Gas Act to make clear that the FPC has safety authority with respect to the importation of LNG.[6] Further, the draft bill proposes to amend Section 6 of the Safety Act, 49 U.S.C. 1676, the judicial review provision of that statute, to provide for finality of DOT decisions in proceedings before this agency. There has been some concern that parties who participate in proceedings under Sections 3 and 7 of the Natural Gas Act might contest a minimum Federal standard prescribed by DOT under the Safety Act and thus cause unnecessary delay in this Commission's proceedings. Our amendment would prevent such an occurrence.

It is in light of these considerations that S. 2183 should be analyzed. Even if the Commission's authority over safety would be curtailed under the provisions of the Natural Gas Pipeline Safety Act, we would continue to have the responsibility under NEPA as construed by case law to conduct our own safety evaluation as part of applicable statutory review procedure.[7]

As I pointed out earlier, it is indeed desirable to correct the ambiguity which the Natural Gas Pipeline Safety Act created. But this should not be done by enacting S. 2183 which would compel the Federal Power Commission to accept the judgment of the Department of Transportation on public safety of natural gas pipelines. It is my recommendation that Congress resolve the jurisdictional dispute by confirming the Congressional mandate of the FPC to set safety standards which are necessary for the public convenience and necessity. I believe that the overriding public interest in gas safety is best served by continuing the present arrangement under which two Federal agencies, rather than one, have authority over gas facilities which have an inherent potential for catastrophic property damage and loss of life.

I, therefore, recommend that the jurisdictional conflict between the Federal Power Commission and the Department of Transportation be resolved by clarifying the Natural Gas Pipeline Safety Act as proposed in my draft bill.

JURISDICTION OF FPC OVER LNG

Now let me turn to the more general question as to the need for additional legislation for offshore pipelines or liquefied natural gas transportation, siting and storage.

In the view of the Federal Power Commission no special legislation is needed to regulate safety standards for liquefied natural gas importation, sale for resale or transportation subject to Federal Power Commission jurisdiction.

As I outlined in my testimony before the Senate Committee on Commerce on June 14, 1974, the Federal Power Commission held in the March 1972 *Distrigas* proceeding, 47 FPC 752 that liquefied natural gas (LNG) is natural gas as that term is defined in Section 2 of the Natural Gas Act and that Distrigas' proposed LNG import was subject to our regulatory jurisdiction under Section 3 of the Natural Gas Act. (Hearings before the Senate Committee on Commerce, 94th Cong., 2d Sess., Committee transcript at pp. 234–266). The Commission's safety

---

[6] This amendment is a codification of the decision in *Distrigas Corporation* v. *Federal Power Commission*, 495 F. 2d 1057 (D.C. Cir. 1974), *cert. denied*, 419 U.S. 834 (1974).

[7] Cf. *Calvert Cliffs Coordinating Committee* v. *Atomic Energy Commission*, 449 F. 2d 1109 (D.C. Cir. 1971).

jurisdiction over LNG based on Section 3 authority over the importation of natural gas has been upheld by the United States Court of Appeals for the District of Columbia in *Distrigas Corporation, et al.*, v. *Federal Power Commission*, 495 F.2d 1057 (D.C. Cir. 1974) cert. denied, 419 U.S. 834 (1974).[8]

As a result of our action in the *Distrigas* proceeding, confirmed by court review, the Commission now asserts complete jurisdictional control over the importation and exportation of LGN, as well as its sale for resale and transportation in interstate commerce.

FPC review of safety concerns in processing an application for the approval of LNG facilities is well illustrated in the March 30, 1973 order in the *Columbia* LNG proceeding. That order contained the following pertinent safety requirements:

"(B) The authorization granted herein shall not take effect until all necessary Federal, State, and local authorizations have been secured. Such authorizations shall be required with respect to all facilities constructed pursuant to Opinions No. 622 and 622–A and this Order. A copy of each such authorization shall be submitted to the Commission prior to the commencement of construction. Such authorizations shall include, but are not limited to, building permits, Coast Guard clearances of vessels and harbor operations, and statements of compliance with applicable Government and industry safety codes governing the design, installation, inspection, testing, construction, operation, replacement, and maintenance of facilities.

(C) The Petitioners shall file certificates of compliance with section 7 of the Natural Gas Pipeline Safety Act and the regulations of the Office of Pipeline Safety of the Department of Transportation issued pursuant thereto, shall advise the Commission of all changes in design and construction techniques, and shall advise the Commission of any safety standards adopted by the Petitioners which impose a higher or different safety standard than is required by such regulations of the Department of Transportation."

Columbia LNG Corp., et al., 49 FPC 809, 815–817 outlined our evaluation of all safety aspects of the proposed project. These include worker-safety problems, safety aspects of tunnel design, construction and maintenance, the safety checks provided in the facility's operations and communications system, the adequacy of the proposed facility's staffing needs from a safety standpoint, the adequacy of power supply emergency backup systems to guarantee the availability of essential equipment, fire detection devices and procedures, emergency shut down and evacuation systems and procedures, leak detection procedure, and the safety of the facilities and procedures to be used in unloading LNG from the tankers.

The Commission has also required the presentation of more detailed information on safety for LNG facility certification under guidelines of the National Environmental Policy Act (NEPA) of 1969, 42 USCA 4321 *et seq.*[9]

---

[8] The court held that the Commission could impose on Distrigas the equivalent of section 7 requirements as a proper exercise of its section 3 authority if the Commission found that the application of such requirements to imports was necessary or appropriate to the public interest. The Commission had ordered Distrigas, an LNG importer, to file with the FPC applications for consideration and determination under Section 7 of the Natural Gas Act for authorization to construct and operate, as appropriate, their LNG terminal, storage, regasification and related facilities at Staten Islnd, New York and Everett, Massachusetts.

[9] The following specific information regarding proposed LNG facilities is required from applicants by Order No. 485 in order to facilitate the safety evaluation by staff in the preparation of environmental impact statements and for the ultimate evaluation of the Commission in carrying out its certificating responsibilities under public convenience and necessity standards defined in Section 7 of the Natural Gas Act:

9.4.1 Liquefied Natural Gas Facilities—Provide detailed design specifications for all facilities to be used for the liquefaction, transport, storage and regasification of liquefied natural gas. Provide information on the flammability and flame resistance of all tank lining and insulation materials. Describe all construction, maintenance, and operational procedures with particular emphasis on procedures to protect public and worker safety and health.

Identify and describe all pertinent safety regulations and codes and any revisions thereto including the Department of Transportation Regulations issued by the Office of Pipeline Safety as Amendment 192–10 (Liquefied Natural Gas Systems) to Part 192, "Transportation of Natural and other Gas by Pipeline: Minimum Federal Safety Standards" and by the U.S. Coast Guard as 33 CFR 6.14–1 (safety measures for waterfront facilities and vessels in port), 33 CFR 124.14 (notice in advance of arrival of a vessel laden with a dangerous cargo), 33 CFR, Part 126 (permits for handling of dangerous cargoes within or contiguous to waterfront facilities), and 46 CFR, Subchapter D (regulations governing tank vessels). Describe detailed procedures that will be used to comply with these safety regulations and codes. Identify all Federal, regional, state, and local

(Continued)

It is thus clear that LNG facilities and transportation must satisfy at least equivalent safety requirements and undergo the same procedure as other natural gas facilities in order to receive the Commission's certification under Section 7(c) of the Natural Gas Act. We are equally concerned with the safety aspects of LNG imports and exports under Section 3 of the Natural Gas Act. It follows that our present authority for regulation in this field is ample and no additional legislation for liquefied natural gas transportation, siting, and storage is necessary to implement our safety jurisdiction over transportation of LNG by pipeline or LNG facilities.

We have not assumed jurisdiction over the transportation of LNG in interstate commerce by any means other than pipeline, such as by truck or barge. (Docket No. R–377, Order Terminating Proposed Rulemaking Proceeding, May 4, 1973).

DOT also assumed jurisdiction over LNG storage facilities under the Natural Gas Pipeline Safety Act. In October 1972, the Secretary of Transportation amended Part 192 of the Safety Act regulations to establish Federal safety standards for facilities. Any amendments to the Natural Gas Pipeline Safety Act, would therefore, extend equally to liquefied natural gas, thus ousting FPC jurisdiction to review the safety aspects of LNG imports.

The transportation of LNG on vessels is subject to the jurisdiction of the U.S. Coast Guard. The "Ports and Waterways Safety Act of 1972" (Waterways, Act, Pub. L. 340, July 10, 1972) directs the Coast Guard to supervise and control the movement of vessels, the transportation, handling, loading, discharging, stowage, and storage of explosives, inflammable or combustible liquids in bulk, and other dangerous cargoes. The Waterways Act also gives the Coast Guard the authority to approve facilities for the handling of such cargoes, and to prescribe such conditions and restrictions relating to the safety of waterfront facilities and vessels in port.

In order to be able to fulfill the statutory mandate to the Federal Power Commission to provide for the safety of LNG imports, exports, sale for resale and pipeline transportation, the staff of the Commission strives to work closely with the Coast Guard, Environmental Protection Agency and the Office of Pipeline Safety in the Department of Transportation to benefit from advanced environmental safety concepts being evolved by these agencies. Federal Power Commission staff members are also participating in an interagency LNG safety study sponsored by the Council on Environmental Quality. Information is exchanged among the participants concerning current Federal programs in LNG safety in order to improve the effectiveness of all safety and environmental aspects of LNG regulation.

We also have a working agreement with the Cryogenics Division of the National Bureau of Standards under which personnel of that agency supplement the expertise of the Commission's staff. Among other contributions, the Bureau of Standards provides staff with a comprehensive review and analysis of the cryogenic safety and design aspects of each LNG facility application pursuant to both Sections 3 and 7 of the Natural Gas Act.

Comments have been requested with respect to the efficiency and usefulness of the Technical Pipeline Safety Standards Committee.

I am told by my staff that this Committee has served a significant role in providing to the Department of Transportation's Office of Pipeline Safety Operations a broad and informed overview of the technical feasibility, reasonableness and practicability of proposed regulations.

Prior to adoption of any new regulation or modification of any existing regulation the Committee has met and thoroughly evaluated all proposals and has provided advise and guidance to the Director of the Office of Pipeline Safety Operations which has resulted in modification of proposals, additional scope to regulations and in some cases withdrawal of proposed regulations.

(Continued)

Government agencies that have responsibilities for assuring compliance with these construction, maintenance, and operation regulations and codes. Describe safety reporting procedures, schedules, and recipients.

9.4.2 Ancillary Facilities—Provide detailed design specifications for all ancillary facilities, owned and operated either by applicant or other parties, which will be constructed or operated in relation to the proposed project, such as processing plants and docking facilities. Describe all construction, maintenance, and operational procedures with particular emphasis on procedures to protect public and worker safety and health. Identify and describe all pertinent safety regulation and codes and describe detailed procedures that will be used to comply with these safety regulations and codes. Identify all Federal, regional, state and local Government agencies that have responsibilities for assuring compliance with these construction, maintenance, and operation regulations and codes. Describe safety reporting procedures, schedules, and recipients.

The Committee has suggested new areas of consideration for expansion of the scope of regulations.

It appears that the Committee is serving a necessary and useful function in its role as presently defined by the Pipeline Safety Act of 1968. It is the view of my agency that the Committee should be continued as presently mandated by the law.

ATTACHMENT A

FEDERAL POWER COMMISSION,
Washington, D.C., November 27, 1974.

Hon. HARLEY O. STAGGERS,
Chairman, Special Subcommittee on Investigations, Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your letter of November 13, 1974, received in my office on November 19, 1974, concerning the continued inability of DOT and FPC to formulate a working agreement on the scope of our respective jurisdictional responsibilities for the regulation of the safety of liquefied natural gas (LNG) and LNG facilities. At my request, Secretary Brinegar's designee, Deputy Under Secretary of Transportation Robert Clement on November 5, 1974, met with me in a further effort to resolve our points of disagreement. Subsequent conversations have been held, including as recently as today, between me and Mr. Clement and members of our respective staffs in an effort to resolve our difficulties.

As you know from my previous correspondence, on April 11, 1974, I first requested negotiations with DOT concerning the issues raised in your March 1974 report. Again on June 4, 1974, I requested DOT to assign personnel to work with my staff on this assignment. On July 31, 1974, I notified you that "tentative agreement has been reached in principle by OPS, Coast Guard, and FPC staff representatives that a working agreement can be devised that should minimize and, where possible, eliminate conflicts in our overlapping jurisdictional responsibilities." I promised to submit the result of our efforts by September 1, 1974.

During August, DOT raised objections to the terms of our proposed Memorandum of Understanding and on August 30, 1974, my assistant Mr. Gavin, notified Mr. Manelli of your staff that additional delay was unavoidable. These difficulties were not resolved and on September 20, 1974, I so notified you and indicated we were awaiting the written objections of DOT. These written objections were not received and our next indication of DOT's position was the result of my personal intervention with Secretary Brinegar and the subsequent meeting I held with Deputy Under Secretary Clement.

Copies of all the foregoing corespondence are attached as Apendix A to this letter.

Appendix B is my letter of September 6, 1974, to Secretary Brinegar transmitting the proposed Memorandum of Understanding with which DOT has been unable to agree. That letter and the proposed Memorandum of Understanding were not submitted to the Subcommittee previously because we were seeking DOT concurrence before taking such action as recommended in your March 1974 report.

Stated simply, the jurisdictional dispute with DOT involves the extent of this agency's authority to provide for the public safety in certifying LNG facilities and sales pursuant to § 7(c) of the Natural Gas Act and in authorizing LNG imports and exports under § 3 of that Act. Safety is also a primary concern in our environment review responsibilities under the National Environmental Policy Act (NEPA).

Traditionally, the public convenience and necessity standard of § 7(c) and the public interest standard of § 3 have been construed to authorize this Commission to impose safety conditions in the certification of natural gas pipeline facilities and in the authorization of natural gas imports and exports.[1] At the same time, it is undisputed that the Office of Pipeline Safety has authority to promulgate minimum safety standards and regulations under the Natural Gas Pipeline Safety Act with respect to facilities subject to our jurisdiction and such

[1] In addition to our traditional powers under § 3, it was held in a recent decision, *Distrigas Corp.* v. *F.P.C.*, 495 F. 2d 1057 (D.C. Cir. 1974), *cert. denied* —— U.S. ——, October 15, 1974, that it is "fully within the Commission's power, so long as that power is responsibly exercised, to impose on imports of natural gas the equivalent of Section 7 certification requirements both as to facilities and as to sales within and without the state of importation." (Slip op., p. 15).

minimum standards and regulations must be met by applicants seeking approval from this Commission for an LNG facility. Our authority to determine the safety of the siting and routing of natural gas pipeline facilities, including, of course, LNG facilities, is not limited by the Natural Gas Pipeline Safety Act.[2] The overall safety of a proposed LNG facility, including necessary NEPA review procedures, is part of our responsibility in determining if the public convenience and necessity standard of § 7(c) and, in import cases, the public interest standard of § 3, are met in specific cases. As part of that determination we have a statutory obligation to consider and provide for the safety of not only the facility itself but also people, property and environmental values in the vicinity of a proposed facility.

As recognized in the proposed Memorandum of Understanding and in my September 6, 1974, letter to Secretary Brinegar, the dispute that exists between our agencies involves overlapping and conflicting statutory mandates and opposing interpretations of legislative intent. An interagency agreement cannot resolve a dispute of that nature and we have so recognized from the outset and have so stated in the Memorandum of Understanding. We were trying to achieve, however, the alleviation of jurisdictional conflict as directed in your March 1974 report (p. 24) and it is our view that the proposed Memorandum of Understanding would have served that objective.

DOT's only expressed objection to the proposed Memorandum of Understanding is the following provision:

I. The FPC shall through its staff: (a) Notify and provide DOT with copies of any notice of proposed rulemaking by the FPC concerning safety in the transportation of LNG or any facilities related thereto. for comments by the DOT staff, if any, to that docket, prior to the issuance of any final rule.

It is apparently DOT's view that this provision implies FPC jurisdiction over an area reserved to DOT by the Natural Gas Pipeline Safety Act. This provision could, as far as we are concerned, be amended to read as follows and thus avoid this particular point of dispute:

I. The FPC shall through its staff: (a) Notify and provide DOT with copies of any notice of proposed rulemaking by the FPC concerning LNG or any facilities related thereto, for comments by the DOT staff, if any, to that docket prior to the issuance of any final rule.

By such an amendment, both agencies would have a viable working agreement to "alleviate interagency conflicts" as directed at page 3 of your March 1974 report while both recognizing that the underlying statutory dispute cannot be resolved by the interagency agreement. In the statement of purpose at page 2 of the proposed Memorandum of Understanding it is clearly stated that:

. . . The parties recognize that no assurances can be made at this time, that a statutory conflict will not materialize in the future as between FPC and DOT but both are hopeful that the instant working agreement will greatly minimize that eventuality.

It is now clear that DOT is not prepared to accept our proposed Memorandum of Understanding. While we agree that legislation is the ultimate solution to this disagreement, we had hoped to be able to avoid jurisdictional conflicts through interagency agreement as requested in your report. Of course, even in the absence of a formal working agreement we will endeavor to coordinate with DOT to resolve issues of common concern.

To resolve this dispute legislatively, two options would appear to be available. As proposed by Secretary Brinegar in his letter to you on November 25, 1974, the National Gas Pipeline Safety Act could be amended to preclude our conditioning a certificate with any safety standards other than those prescribed by DOT. It should be recognized, however, that even if our authority over safety under the Natural Gas Act were expressly subordinated to OPS jurisdiction under the Natural Gas Pipeline Safety Act as proposed by DOT, we would continue to have the responsibility under the broad public interest standard of § 3 of the Natural Gas Act and under NEPA as construed by case law to conduct our own safety evaluation as part of applicable statutory review procedures.

As a second option, the dispute could also be resolved by amending the Natural Gas Pipeline Safety Act to make it clear that the authority of OPS to promulgate minimum standards and regulations does not preempt our authority to

---

[2] However, OPS regulations governing LNG facilities incorporate by reference the National Fire Protection Association's Standard for the Production, Storage and Handling of LNG (NEPA No. 59A–1971) which includes a section on plant site criteria. See 37 F.R. 21638, October 13, 1971.

determine acceptable site locations and to assure the overall safety of LNG facilities as part of our responsibilities under §§ 3 and 7(c) of the Natural Gas Act.

As a practical matter, we believe the built-in conflicts in our respective legislative mandates could be avoided in perhaps every instance by the kind of coordination and consultation provided in the proposed Memorandum of Understanding. However, we believe that a legislative solution would clarify our respective responsibilities and we will be pleased to assign FPC staff personnel to work with your staff and DOT personnel in formulating legislative options to resolve statutory conflict. We would suggest that as part of this effort the interaction of the FPC and the United States Coast Guard under the Ports and Waterways Safety Act of 1972 should also be studied so that any conflicting mandates between that statute and our responsibilities under the Natural Gas Act and NEPA can also be resolved as necessary.

Sincerely,

JOHN N. NASSIKAS, *Chairman.*

Enclosures: Appendices A and B.

APRIL 11, 1974.

Hon. HARLEY O. STAGGERS,
Chairman, Special Subcommittee on Investigations, of the Committee on Interstate and Foreign Commerce, House of Representatives, Rayburn House Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: In response to your letter of April 4, 1974 concerning the Special Subcommittee on Investigations' report, *Legislative Issues Relating to the Safety of Liquefied Natural Gas Storage*, I have sent the enclosed letter today to Secretary Brinegar.

When the interagency liaison committee requested in the report is established and has formulated a proposed agreement on jurisdictional responsibilities I will be in further touch concerning your expressed wish to review their recommendations.

Sincerely yours,

JOHN N. NASSIKAS, *Chairman.*

Enclosure: Letter to Secretary Brinegar dated April 11, 1974.

JUNE 4, 1974.

Hon. CLAUDE S. BRINEGAR,
Secretary of Transportation,
Washington, D.C.

DEAR MR. SECRETARY: On April 11, 1974, I wrote you concerning the report of the House Commerce Committee entitled, *Legislative Issues Relating to the Safety of Liquified Natural Gas Storage* and the report's recommendation that this Commission, the Office of Pipeline Safety (OPS) and the Coast Guard organize an interagency liaison committee to resolve our respective agencies' roles in the regulation of the handling and storage of LNG.

I would like to renew my request that you designate a representative of OPS and the Coast Guard to meet with my staff on this matter as soon as possible. I am sure we are in agreement on the importance of arriving at a clarification of our respective jurisdictional responsibilities and reporting our conclusions to the House Commerce Committee as requested.

Sincerely,

JOHN N. NASSIKAS, *Chairman.*

FEDERAL POWER COMMISSION,
Washington, D.C., June 13, 1974.

Hon. CLAUDE S. BRINEGAR,
Secretary of Transportation,
Washington, D.C.

DEAR MR. SECRETARY: Thank you for your letter of May 31, 1974, received in my office on the 11th of June, designating Messrs. Caldwell, Grossman and Moser as your representatives to work with my staff on our respective jurisdictional responsibilities concerning LNG.

The following staff members will represent the Federal Power Commission:

1. George P. Lewnes, Assistant General Counsel.
2. Richard F. Hill, Advisor on Environmental Quality.

3. Lewis A. Brubaker, Jr., Chief, Transmission Section, Pipeline Division, Bureau of Natural Gas.

In addition, Emmett J. Gavin, my Assistant, will participate with the staff members I have assigned. I have directed Mr. Lewnes to contact Mr. Caldwell in the very near future to initiate discussions with your staff.

Sincerely,

JOHN N. NASSIKAS, *Chairman.*

FEDERAL POWER COMMISSION,
Washington, D.C., July 31, 1974.

HON. HARLEY O. STAGGERS,
Chairman, Special Subcommittee on Investigations, Committee on Interstate and Foreign Commerce, Rayburn House Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your letter of July 18, 1974, concerning the Commission's efforts to resolve the problem of interagency conflicts with the Office of Pipeline Safety (OPS) and the Coast Guard with respect to the transportation and storage of liquefied natural gas (LNG).

As the result of staff conferences in June, initiated at my request, and again this month, tentative agreement has been reached in principle by OPS, Coast Guard, and FPC staff representatives that a working agreement can be devised that should minimize and, where possible, eliminate conflicts in our overlapping jurisdictional responsibilities, while assuring the integrity of the respective agencies' statutory responsibilities. The staffs have not concluded all of the details of their proposed working agreement and therefore the Commission has not yet been presented with a proposal for our consideration. We cannot, therefore, advise the Committee at this time of the acceptability of the staffs' suggested resolution of the problem.

I am informed that Mr. Caldwell, Director of OPS, has volunteered to prepare an initial draft of a proposed working agreement for the review of the concerned agencies. FPC staff personnel have advised Mr. Caldwell of the Commission's insistence on a prompt conclusion to these interagency deliberations so that the Congress can be advised if legislative action is required to resolve any jurisdictional conflicts. Mr. Caldwell agreed to our staff's suggestion that the results of our interagency consultation be submitted to the House Commerce Committee by September 1, 1974.

The Commission is mindful of the importance of resolving as quickly as possible whether there is a need for a legislative solution to jurisdictional questions with respect to LNG. Assuming the timely submission of the OPS draft proposal, we will submit our views by the suggested September 1st deadline.

Sincerely,

JOHN N. NASSIKAS, *Chairman.*

cc: Honorable Claude S. Brinegar
Secretary, Department of Transportation
400 7th Street, S.W.
Washington, D.C. 20590

Mr. Joseph C. Caldwell
Director, Office of Pipeline Safety
400 7th Street, S.W.
Washington, D.C. 20590

Commandant Chester Bender
United States Coast Guard
400 7th Street, S.W.
G-C/24
Washington, D.C. 20590

AUGUST 30, 1974.

DANIEL J. MANELL, Esquire
Chief Counsel, Special Subcommittee on Investigations, Committee on Interstate and Foreign Commerce, Rayburn House Office Building, Washington, D.C.

DEAR MR. MANELLI: As I indicated in my call to you today, it appears that additional time will be reuired to finalize interagency negotiations with the Department of Transportation concerning our attempt to resolve, where possible,

conflicts in our overlapping jurisdictional responsibilities with respect to the tranportation and storage of liquified natural gas (LNG).

The Commission's letter of July 31, 1974 to Chairman Staggers referred to our understanding with the Office of Pipeline Safety that the results of our consultations would be submitted to the Subcommittee by September 1, 1974. We now believe that some additional time will be reuired, although it is the intention of this agency to submit the results of our negotiations with DOT within the first two weeks of September.

Sincerely,

EMMETT J. GAVIN,
Assistant to the Chairman.

FEDERAL POWER COMMISSION,
Washington, D.C., September 6, 1974.

Hon. CLAUDE S. BRINEGAR,
Secretary of Transportation,
Washington, D.C.

DEAR MR. SECRETARY: Enclosed for your review is the proposed final draft of a Memorandum of Understanding arrived at by our respective staffs in an effort to devise procedures to minimize any potential jurisdictional conflicts between our agencies' responsibilities for the regulation of liquefied natural gas (LNG).

You will recall that this staff effort was undertaken at my request expressed in my letters to you on April 11, 1974 and June 4, 1974. Following your response dated May 31, 1974 and received in this office on June 11, 1974 the Commission's staff initiated efforts with your representative, Mr. Caldwell, to formulate appropriate procedures to avoid as much as possible any conflicts in our respective jurisdictional responsibilities. This project, of course, was the direct result of a request by Chairman Staggers of the House Commerce Committee expressed in a letter of April 4, 1974, to me and in a report of the Special Subcommittee on Investigations (Legislative Issues Relating to the Safety of Liquefied Natural Gas Storage) which accompanied that letter. That report stated, *inter alia*, that:

The Subcommittee therefore urges OPS and FPC, as well as the USCG, to form a liaison committee to formulate an agreement to alleviate jurisdictional conflict over the full spectrum of LNG handling and storage matters, and submit a draft to this subcommittee prior to its adoption. (page 24)

We are satisfied that the enclosed Memorandum of Understanding represents a workable and mutually beneficial interagency agreement regarding the minimization of LNG jurisdictional problems between this Commission and the Office of Pipeline Safety and the Coast Guard. The fundamental problem as far as a majority of this Commission is concerned is that jurisdictional responsibility with respect to LNG safety has been statutorily divided between our respective agencies under the Natural Gas Act, the Natural Gas Pipeline Safety Act and Ports and Waterways Safety Act, and this division of responsibility cannot be altered or amended by interagency agreement. Only the courts or Congress can resolve this impasse; ultimately Congress may have to do so by vesting exclusive jurisdiction in one agency, either this Commission, DOT, or some other new or existing governmental entity. Commissioner Brooke interprets the Pipeline Safety Act of 1968 as pre-empting to the Department of Transportation absolute responsibility for jurisdictional natural gas pipeline safety, including that of liquefied natural gas. He recognizes that development of LNG technology since the law's enactment has created various conflicts among agencies in LNG safety matters, but believes that Congressional clarification is the proper course of action.

This Commission has consistently supported and recommended the consolidation of energy jurisdiction in government in order to promote the attainment of energy self-sufficiency and improve the administrative process. As important components of our national energy system we believe that LNG and LNG facilities should be regulated in a manner that is consistent with our national energy goals.

In the absence of a statutory mandate that, to the satisfaction of us all, unequivocally vests LNG safety jurisdiction in one agency of government, we cannot guarantee that our overlapping statutory duties will not result in interagency

conflict. Nothing we can agree to procedurally will obviate that inherent possibility. We can, however, as requested by the House Commerce Committee's Subcommittee "formulate an agreement to alleviate jurisdictional conflict" and we believe the enclosed Memorandum of Understanding, as agreed to by our staffs, can serve that function. We would appreciate the benefit of your views on this proposal so that we can comply with the Subcommittee's request to review our proposed agreement before its formal adoption. Furthermore, if and when adopted we would suggest that the Memorandum be noticed jointly in the Federal Register by this Commission and DOT.

Our staff, with the concurrence of Mr. Caldwell, has made a commitment to the Special Subcommittee on Investigations that the results of our negotiations would be submitted for the Subcommittee's review within the first two weeks of September. Therefore, your prompt attention to this matter will be greatly appreciated.

Sincerely,

JOHN N. NASSIKAS, *Chairman.*

Enclosure: Draft of Memorandum of Understanding.

MEMORANDUM OF UNDERSTANDING

Parties.—The parties to this Memorandum are the Federal Power Commission (FPC) and the United States Department of Transportation (DOT).

Existing responsibilities.—Under the provisions of the Natural Gas Act, as amended, 15 U.S.C. 717–717*n*; *et. seq.*, no person may engage in the sale for resale or transportation of natural gas all in interstate commerce unless there is in force with respect to such person a certificate of public convenience and necessity issued by the FPC for the construction and operation of such facilities as are necessary for the effectuation of such sale or transportation. Similarly authorization must first be received from the FPC before engaging in the importation or exportation of natural gas in foreign commerce. The FPC has the authority to attach to the issuance of any such certificates and the rights granted thereunder such reasonable terms and conditions as the public convenience and necessity may require.

Liquefied natural gas (LNG) is natural gas within the statutory language of the Natural Gas Act.

The DOT, acting through the Office of Pipeline Safety (OPS) and the United States Coast Guard (USCG), has authority and responsibility to provide for the safe transportation of natural gas by pipeline and by vessel. OPS is required by the Natural Gas Pipeline Safety Act, 49 U.S.C. 1671, *et seq.*, to establish minimum federal safety standards for the transportation of natural gas and for the safety of pipeline and appurtenant facilities used in such transportation in interstate and intrastate commerce. The USCG is authorized by the Ports and Waterways Safety Act of 1972, 33 U.S.C. 1221, *et seq.*, to establish rules and regulations, where vessels are involved, for the handling, loading, discharge and storage of natural gas and for the protection of any vessel, structure, waterway, or adjacent port area.

Purpose.—Both the FPC and DOT are desirous of establishing procedures for a free flow of information and for mutual cooperation so as to assure that facilities utilized for the sale for resale or transportation all in interstate commerce of LNG or for the exportation or importation thereof in foreign commerce are adequately covered by comprehensive federal safety regulations and preconditions to their operations. The parties recognize that no assurances can be made at this time, that a statutory conflict will not materialize in the future as between FPC and DOT but both are hopeful that the instant working agreement will greatly minimize that eventuality.

Now, therefore, the FPC and DOT do agree as follows:

I. The FPC shall through its staff:

(*a*) Notify and provide DOT with copies of any notice of proposed rulemaking by the FPC concerning safety in the transportation of LNG or any facilities related thereto, for comments by the DOT staff, if any, to that docket, prior to the issuance of any final rule.

(*b*) Provide DOT a copy of all notices issued by the FPC on applications filed with the FPC which seek (1) certificates of public convenience and necessity for the construction and/or operation of LNG facilities; (2) to amend existing certificates of public convenience and necessity to authorize the extension, improvement, or other modification of an LNG facility; and (3) authorization for the importation or exportation of LNG in foreign commerce inclusive of all

amendments. Copies of all subsequent orders related thereto issued by the Commission shall also be provided.

(*c*) Notify and consult with DOT on any proposed safety evaluation report being prepared by the FPC staff, inclusive of any environmental review dealing with safety, concerning an LNG facility for coordination and comment by DOT prior to the finalization of the FPC staff report.

(*d*) Review and provide comment, if any, to any proposed rulemaking by DOT as specified at II (a) below.

II. The DOT shall, through its staff:

(a) Notify and provide the FPC with copies of any notice of proposed rulemaking concerning the transportation of LNG or any facilities related thereto by DOT/OPS or DOT/Coast Guard for comments by the FPC staff, if any, to that docket, prior to the issuance of any final rule.

(b) Notify and provide the FPC with copies of proposed and final directives, rules, and procedures that may be established by DOT/OPS and DOT/Coast Guard regarding the transportation of LNG and any facilities necessary therefor.

(c) Review and provide comments, if any, to any proposed rulemaking or preliminary FPC staff report as specified in 1 (a) and (c) above.

To effectively effectuate this Memorandum of Understanding, both parties shall designate contact representatives who shall have the responsibility of, in addition to the specifics above, maintaining routine informal consultation and coordination.

In those docketed matters before the FPC which have, by Commission order, been set for formal hearing, public notice shall be given to all parties to that proceeding and their attendance invited to all conferences to be held between the staff members of FPC and DOT in connection with that proceeding and all correspondence between FPC and DOT related thereto shall be placed in the public files of FPC.

The procedures set forth in the foregoing paragraph are inapplicable to those instances where members of the DOT staff are to testify in a proceeding as agents of the FPC. Additionally, nothing contained herein shall preclude DOT from filing a formal petition to intervene in any proceeding before the FPC consistent with the FPC's Rules of Practice and Procedure, where, in DOT's view, there is a lack of unanimity between the staffs of the FPC and DOT on a safety issue or where DOT is of the view that their position on said issue will not be adequately represented by the FPC staff in the formal proceedings.

Approved:

United States Federal Power Commission,
By: JOHN N. NASSIKAS, *Chairman.*
United States Department of Transportation,
By: CLAUDE S. BRINEGAR, *Secretary.*

Hon. HARLEY O. STAGGERS
Chairman, Special Subcommittee on Investigations, Committee on Interstate and Foreign Commerce, Rayburn House Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: On September 6, 1974, I transmitted a proposed Memorandum of Understanding to Secretary of Transportation Brinegar reflecting what this Commission believes to be a viable program of consultation and coordination to achieve the alleviation of jurisdictional conflicts concerning liquefied natural gas (LNG) safety jurisdiction. The substance of this proposed working agreement was arrived at by Department of Transportation and Federal Power Commission staff representatives as the result of negotiations I initiated as requested in the Subcommittee's LNG safety jurisdiction report of this past April.

My September 6 letter to Secretary Brinegar stressed the need to expedite the submission of our proposed working agreement for your subcommittee's review prior to its adoption as was also requested in your LNG safety jurisdiction report. My letter of July 31 to you and a subsequent assurance by my staff to your counsel, indicated our intention to submit the results of our interagency negotiations in the first part of September. Mr. Caldwell of the Department of Transportation's Office of Pipeline Safety concurred in this time schedule. The need to meet this schedule was the basis for my request to the Department of Transportation on September 6 for expedited review and concurrence.

It now appears that Department of Transportation is having difficulty with the terms of the proposed Memorandum of Understanding and a letter from De-

partment of Transportation's General Counsel on this matter was promised and has been expected all week. Since we have not yet received that communication, I want to advise you of the nature of the problem that is causing further delay on this matter.

Sincerely,

JOHN N. NASSIKAS, *Chairman.*

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
SPECIAL SUBCOMMITTEE ON INVESTIGATIONS OF THE
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
ROOM 2323, RAYBURN HOUSE OFFICE BUILDING,
Washington, D.C., November 13, 1974.

Hon. JOHN N. NASSIKAS,
Chairman, Federal Power Commission, Washington, D.C.

DEAR MR. CHAIRMAN: On April 4, 1974, as a result of recommendations made in a March 1974 report by the Special Subcommittee on Investigations on the safety of liquefied natural gas (LNG) storage, I asked the Department of Transportation and the Federal Power Commission to negotiate an interagency agreement alleviating jurisdictional conflicts in LNG regulation, and to submit to the Subcommittee a draft of such agreement before its adoption.

The Subcommittee promptly was informed by both FPC and DOT that such negotiations would be undertaken. However, no further information was forthcoming until July, when I requested a progress report. I was informed that a draft agreement would be submitted by September 1, 1974. On August 30, and again on September 20, the Subcommittee was notified of certain unspecified difficulties requiring postponement of the draft's submission.

Further inquiries made recently have revealed that the matter apparently still has not been resolved.

This is to request that you furnish the Subcommittee with a definitive statement as to whether you have reached an agreement along the lines discussed in the Subcommittee's report at pages 3 and 22–24. If you have not, you are requested to identify the points of disagreement.

I would be grateful for your timely response. With every good wish,

Sincerely,

HARLEY O. STAGGERS, *Chairman.*

THE SECRETARY OF TRANSPORTATION,
Washington, D.C., November 25, 1974.

Hon. JOHN N. NASSIKAS,
Chairman, Federal Power Commission,
Washington, D.C.

DEAR JOHN: Thank you for meeting with my Deputy Under Secretary, Robert H. Clement, on November 5th. As he indicated, we share your desire to identify clearly the limits of our respective responsibilities for the safety regulation of the interstate transportation and storage of LNG.

I have reviewed personally your proposed Memorandum of Understanding and have discussed the matter at some length with our General Counsel. It is my conclusion that your suggested paragraph I(a) in the Memorandum is inconsistent with DOT's statutory authority to promulgate regulations providing for the safety of the transportation and storage of gas, as provided by section 7 of the Natural Gas Pipeline Safety Act of 1968 ("the Act").

Under our interpretation of the language of section 7 of the Act and the legislative history of the Act, it was the intent of Congress to provide DOT with complete authority to promulgate regulations providing for the safety of the transportation of gas and gas pipeline facilities, except with regard to safety of the location or routing of any pipeline facility and rural gathering lines which are matters specifically excepted from DOT safety regulatory authority under the Act. This interpretation of the Act has been asserted repeatedly by officials of DOT and is in accord with the testimony of your predecessor, Lee C. White, that S. 1166 (subsequently enacted as the Natural Gas Pipeline Safety Act of 1968) provides that DOT has the final word on safety.

As you know, the Special Subcommittee on Investigations of the House Interstate and Foreign Commerce concurs in our interpretation of DOT's authority.

This concurrence was explicitly stated in its report entitled "Legislative Issues Relating to the Safety of Liquefied Natural Gas Storage", dated March 1974. In the conclusion of that report, commencing on page 22, the Subcommittee, while finding weaknesses in OPS safety regulatory efforts, found that:

"If Congress intended the FPC to exercise the safety jurisdiction Chairman Nassikas is now claiming, it never would have authorized the creation of OPS.

"Chairman Nassikas' contention that FPC has authority to impose additional, or higher safety standards than are imposed by OPS is almost certainly wrong, at least as to factors already addressed by OPS regulations.

"The reason for making satisfaction of OPS requirements binding on the FPC was to prevent exactly the situation which has now developed: applicants being compelled to comply with two different—and conceivably conflicting—sets of Federal regulations on the same subject matter."

We acknowledge our responsibility under section 7 of the Act to consult with the FPC before establishing a standard or granting a waiver from a standard which would affect continuity of any interstate gas service, and we will continue to coordinate with the FPC on these matters. We cannot concur, however, in your assertion that the FPC has authority to promulgate regulations in addition to those established by DOT except insofar as they relate to the enhancement of public safety through the establishment of criteria for selection of the location and route of gas pipeline facilities.

In view of our long-standing and apparently irreconcilable differences concerning our respective statutory responsibility for gas pipeline safety, we are recommending to Chairman Staggers the adoption of an amendment to section 7 of the Act to clarify our respective safety regulatory responsibilities in accord with the interpretation expressed by the Subcommittee in its March 1974 report.

I am enclosing a copy of my letter to Chairman Staggers in response to his several inquiries, and I would be grateful if you would provide me with a copy of your reply to Chairman Staggers.

Sincerely,

CLAUDE S. BRINEGAR.

Enclosure.

THE SECRETARY OF TRANSPORTATION,
Washington, D.C., November 25, 1975.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: At your request my Deputy Under Secretary and other members of my staff have met on several occasions with the Chairman and staff of the Federal Power Commission in an effort to reach an agreement on the respective authority of the Office of Pipeline Safety ("OPS), the United States Coast Guard ("USCG"), and the Federal Power Commission ("FPC") to provide for the safety regulation of the transportation and storage of liquefied natural gas ("LNG").

I have personally reviewed this matter and am unable to concur in the repeated assertion of the Chairman of the FPC that the FPC possesses, concurrently with OPS and the USCG, statutory authority and responsibility for the promulgation of safety regulations for the interstate transportation and storage of LNG. It is our view that under the language of section 7 of the Natural Gas Pipeline Safety Act of 1968 ("the Act") and the legislative history of the Act, it was the intent of Congress to provide DOT with complete authority to promulgate regulations providing for the safety of the transportation of gas and gas pipeline facilities, except with regard to safety of the location or routing of any pipeline facility and rural gathering lines which are matters specifically excepted from DOT safety regulatory authority under the Act. This interpretation of the Act has been asserted repeatedly by officials of DOT and is in accord with the testimony of Lee C. White, former FPC Chairman, that S. 1166 (subsequently enacted as the Natural Gas Pipeline Safety Act of 1968) provides that DOT has the final word on safety.

Notwithstanding our discussions, and our efforts to settle our differences by means of an interagency agreement, it is still the view of the Chairman of the FPC that jurisdictional responsibility with respect to LNG safety has been statutorily divided between our respective agencies. It is also his view

that this division of responsibility cannot be altered or amended by interagency agreement.

Accordingly, I must regretfully advise you that it is my belief that further efforts on our part to resolve this dispute would be futile. Because of this fact and because of my desire to provide for uniform Federal safety regulation of both inter in intrastate gas pipeline facilities, we currently have under consideration a legislative proposal amending section 7 of the Act to provide expressly that the FPC is precluded from conditioning the issuance of cerificates of public convenience and necessity upon compliance with safety standards other than those prescribed by the Secretary of Transportation.

I believe this amendment merely clarifies the original legislative intent, as expressed in the Act, to place all authority for gas pipeline safety regulation in the Department of Transportation. Nevertheless I think it would avoid redundant or conflicting Federal safety regulations and would ensure establishment of effective safety regulations for all gas pipeline facilities used in both the interstate and intrastate transportation of gas.

I am hopeful this matter may be brought to an expeditious conclusion, and I will endeavor to assist the Subcommittee in any manner possible.

Sincerely,

CLAUDE S. BRINEGAR.

ATTACHMENT B

FEDERAL POWER COMMISSION—DRAFT OF A BILL

To amend the Natural Gas Pipeline Safety Act and the Natural Gas Act

Be it enacted by the Senate and House of Representatives of the United States assembled,

Section 1. That section 6 of the Natural Gas Pipeline Safety Act, 49 U.S.C. 1676, is amended by adding at the end of such section the following new subsection:

"Finality of Appeal

"(f) Any proceeding or adjudication authorized under this Chapter which becomes final and binding on any party thereto, shall not be the basis for any proceeding authorized by section 717r of Title 15."

Section 2. That section 7 of the Natural Gas Pipeline Safety Act, 49 U.S.C. 1676, is amended by striking the second sentence and inserting in lieu thereof:

"In any proceedings under Section 717 of Title 15 for authority to establish, construct, operate or extend a gas pipeline which is or will be subject to minimum Federal or other applicable safety standards, any applicant shall certify that it will design, install, inspect, test, construct, operate, replace and maintain the pipeline facilities in accordance with minimum Federal and other applicable safety standards and plans for maintenance and construction," and that section 7 is further amended by adding at the end of such section the following:

"Nothing herein precludes the Federal Power Commission from applying safety standards more stringent than those minimum Federal standards authorized, ordered and established by the Secretary under this Chapter, when such more stringent standards are, for public convenience and necessity, necessary to facilitate the Commission's authority in any proceedings under section 717 of Title 15 for authority to establish, construct, operate or extend a gas pipeline."

Section 3. That section 3 of the Natural Gas Act, 15 U.S.C. 717b, is amended by adding at the end of such section the following: "The Commission may apply, to persons attempting to secure an order of the Commission authorizing those persons to import any natural gas in a proceeding under this section, those requirements the Commission may apply to persons attempting to secure a certificate of public convenience and necessity under subsection 717f(c) of this Chapter; *Provided,* That the Commission finds that applying such requirements is necessary or appropriate to the public interest."

Section 4. That section 7 of the Natural Gas Act, 15 U.S.C. 717f, is amended by adding at the end of such section the following new subsection:

"(i) The Commission is authorized to prescribe such standards, rules, regulations, restrictions, conditions, or orders with respect to the location, construction, extension, modification, operation, and maintenance of facilities of natural gas companies as it shall determine are necessary for the promotion of safety; *Provided,* That nothing herein contained shall be held or construed to modify or repeal any of the provisions of the Natural Gas Pipeline Safety Act or other applicable Federal laws. Such standards, rules, regulations, conditions, or orders shall be enforced with respect to existing facilities of such companies only after notice and opportunity for hearing."

Senator BEALL. Our next witness is Mr. Jerome J. McGrath.

Mr. McGrath, we congratulate you also for getting through the water today to get here.

You may, if you prefer, put your whole statement in the record and abbreviate it, if you like.

STATEMENT OF JEROME J. McGRATH, EXECUTIVE VICE PRESIDENT AND GENERAL COUNSEL, INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

Mr. MCGRATH. I would like my whole statement included in the record. I will summarize it for you, hitting the salient points.

I am Jerome J. McGrath. I am executive vice president and general counsel of the Interstate Natural Gas Association of America (INGAA), Washington, D.C.

INGAA is a national organization representing virtually all of the major interstate natural gas transmission lines in the United States. Our companies account for 90 percent of all gas transported and sold in interstate commerce, and all of our companies are subject to the jurisdiction of the Department of Transportation under the Natural Gas Pipeline Safety Act of 1968 [49 U.S.C. 1671, et seq.] insofar as safety matters are concerned, and to the FPC under the Natural Gas Act [15 U.S.C. 717, et seq.] with respect to economic regulation.

We appreciate very much, Mr. Chairman, the opportunity to appear before your committee to present our views on the matters now before you.

Let me say at the outset that safety in pipeline operations is and always has been a matter of prime concern and of top priority in our industry. Our pipeline companies recognize the need for good, workable, practical safety standards. To a very large degree, this objective has been achieved by the Federal Pipeline Safety Standard adopted by the Department of Transportation except for several areas which I will discuss later.

I wish to emphasize, however, that this has been accomplished at no small cost to the pipelines and the customers they serve. At the time the Pipeline Safety Act was passed in 1938, the indutry was governed by the American Standards Association B31.8 Code for Pressure Piping.

This was a good safety code, but it has been substantially improved upon by the Federal standards adopted by DOT. Since the new regulations were adopted in 1970, the pipeline industry has expended close to $400 million in upgrading or modifying existing systems to bring them into compliance with the new standards.

I think you would have to agree, Mr. Chairman, that the underground transmission of natural gas by pipeline is the safest, most efficient transportation system in operation today.

We have appended to our testimony the most recent chart published by the NTSB showing transportation accidents. If you will look at the chart, you will see that the pipeline accidents are barely noticeable. One death as a result of a pipeline accident is one death too many, but in 1974, the deaths from pipeline accidents were so small, 34 as compared to thousands in the other categeries, that we feel we have a good safety record. Only 4 out of the 34 were as a result of gas transmission failures.

There are several areas in which prompt DOT action is needed and long overdue. The most important is the establishment of offshore pipeline safety standards. This question has been pending before the Office of Pipeline Safety Operations and its predecessor for at least 3 years and perhaps longer.

One obstacle has been a running dispute between the U.S. Geological Survey as to which department has jurisdiction over the pipelines.

We recommend legislation that would clearly establish safety jurisdiction over pipelines in offshore areas in the OPS of the Department of Transportation. It is my understanding that DOT will be issuing a notice of proposed standards for offshore natural gas pipelines shortly. They published a notice of liquid line offshore standards last week.

Section 6 of Senator Magnuson's bill is very much in point on this score, although it deals with the overlapping FPC jurisdiction. S. 2183 would prohibit the FPC under its certificate conditioning powers, to require a pipeline applicant to comply with safety standards other than those prescribed by the Secretary of Transportation.

We urge that a similar amendment be adopted with respect to conflicting Department of Interior offshore jurisdiction and to forbid other Federal agencies as well from attaching safety conditions to a permit, certificate or other authorization, other than those adopted by the Department of Transportation.

We strongly disagree with Mr. Nassikas' position that LNG should be subjected to safety requirements prescribed by FPC. In the formative days of the Natural Gas Pipeline Safety Act, the effort was made and the suggestion was made that the FPC should have sole jurisdiction over safety matters.

The Congress rejected that concept and rather wholeheartedly. They said that safety authority should reside in the Department of Transportation. We agree. Our main objective is to have one set of regulations to which the interstate lines will be subject.

Liquefied natural gas is an integral part of an interstate pipeline operation. The Cove Point Plant that the chairman mentioned is an integral part of the pipeline systems to which it is attached.

We think that it would be a terrible mistake and would be counterproductive to safety to have two agencies promulgating safety standards for the same facility. The Chairman in his testimony made reference to the findings of Congress with respect to—it appears on page 7 of the Chairman's testimony—that the FPC would retain certain safety authority.

What he neglected to point out was that it went on to state that an applicant may submit to the FPC a certification that he has complied with all of the safety standards promulgated by DOT and this certification would be conclusive on the FPC.

The Chairman, in a sense, was saying that the Office of Pipeline Safety is not equipped to do the job. We disagree with that. The Office of Pipeline Safety has promulgated numerous regulations since it has been in operation.

We have an opportunity to comment on those regulations in their formative stages. We have seen no safety standards that the FPC has issued. I think they are getting into an area where they don't have expertise, frankly. As far as our companies go, we are subject to both agencies but in separate areas of interest.

Senator BEALL. Suppose the Office of Pipeline Safety prescribes standards, and during a course of a certification process, the FPC took exception to these standards and said there should be a higher degree of safety standards. Do you think the FPC should have that authority?

Mr. MCGRATH. I think it should convey whatever concern it has to the Office of Pipeline Safety. The standards themselves as promulgated by DOT are sent out for notice and comment.

If the FPC feels they are inadequate, they can certainly convey that information to the Office of Pipeline Safety. Congress has charged the OPS with establishing safety standards. They have a Technical Pipeline Safety Standards Committee which I referred to in my testimony to guide them.

Senator BEALL. I am not sure whether the OPS promulgates standards on the basis of the norm and applies them nationwide.

Are there cases where a higher degree of safety precaution should be taken because of the particular terrain or the particular environment in which the pipeline is located that might not be covered by an OPS minimum standard?

Mr. MCGRATH. I doubt that because you have built into the regulations your clasification standards which take into account population density and so forth. All of those would be taken into account by OPSO in establishing the standards. To the best of my knowledge, the standards as adopted take into consideration whatever particular situation is present.

Senator BEALL. Does OPS inspect the site prior to the time the pipeline is put into place?

Mr. MCGRATH. Prior to the time it is put in place?

Senator BEALL. Yes.

Mr. MCGRATH. In various construction projects I am aware of, they have had inspectors on the job; yes, sir. To the best of my knowledge.

Senator BEALL. Should DOT have the authority to impose a higher standard than OPS has prescribed?

Mr. MCGRATH. DOT?

Senator BEALL. On a case-by-case basis, should they have the authority to prescribe a standard that is higher than the norm?

Mr. MCGRATH. DOT?

Senator BEALL. Or OPS.

Mr. MCGRATH. In an individual case, it could say to an applicant that in this particular situation, in view of the facts before us, we would require you to do X, Y, Z, which may be over a particular standard. It could require that.

The point is, we would not have two standards that the pipeline would have to contend with.

Senator BEALL. I presume that is what FPC is doing. They are saying during the certification process, although this is the norm for safety, we will require you to do a little more than the norm.

Mr. MCGRATH. They have no norm.

Senator BEALL. You're saying there is a norm that OPS should require an individual pipeline to exceed providing that authority is vested with OPS?

Mr. MCGRATH. I think the OPS is the organization charged with making that determination. You say the "norm." The OPSO has standards that have been published in accordance with the act.

After evaluation by the Technical Pipeline Safety Standards Committee, after pubic notice and comment, those are standards, just as FAA has certain standards. You say "norm." There is no norm, they are safety standards.

Senator BEALL. They are standards, but I suspect the minimum standards.

Mr. MCGRATH. "Minimum" is an unfortunate word. Standards that the Office of Pipeline Safety in its charge from Congress has determined——

Senator BEALL. The required standards. They are the required standards, but generally published to fit the average case. They are published to provide a level of protection that is desirable all over the country.

Mr. MCGRATH. They are fit to—they are published to fit the pipeline operations of an interstate natural gas transmission system or distribution system if there is no State jurisdiction. There isn't that much variation between pipelines.

I have difficulty in your saying they don't have standards to fit every individual situation. There are 123 pipeline companies subject to DOT. I hope you would not be suggesting, Senator, that they have 123 or 200 different standards.

Senator BEALL. No; but I'm suggesting that there are probably different standards that would apply in different areas. For instance, suppose you're going through an area subject to earthquakes, you would have a different standard, I presume, for those areas?

Mr. MCGRATH. To a degree, we have that now.

Senator BEALL. If you're going to publish standards, you have to exceed the required standard in certain instances to take into consideration those factors.

Mr. MCGRATH. I think the regulations today encompass or contemplate that. Certainly, with the pipeline systems operating in this country, down in the lower 48, they do. In Alaska, they may have special problems.

Senator BEALL. Is OPS prescribing these kinds of standards?

Mr. MCGRATH. Yes; I would say its standards cover the natural gas pipeline operations. I believe they have the authority to—if there are particular situations to address, to address them.

Senator BEALL. Have they done that?

Mr. MCGRATH. Oh, they have in certain situations granted special petitions before it for waiver of standards.

Senator BEALL. Have they prescribed the standards to take care of the special situations?

Mr. MCGRATH. Well, one illustration, the offshore pipeline standards are different than the standards onshore.

Senator BEALL. How about onshore?

Mr. MCGRATH. I can't recall any specific instances, but I would be glad to check the record or check with OPS.

Senator BEALL. Don't they have the authority to do that?

Mr. MCGRATH. If there is a particular situation confronting it that might be at variance with the standards, I would say they have authority to take a look at that and see what remedy has to be made or what deviation is appropriate from the standard.

Senator BEALL. As FPC does, on a case-by-case basis?

Mr. MCGRATH. FPC does it on a case-by-case basis.

Senator BEALL. Do you think OPS could do it on a case-by-case basis?

Mr. MCGRATH. The Natural Gas Pipeline Safety Act has directed OPS to publish standards. These standards apply to the natural gas pipeline industry.

I think it would be a mess, if you will, if they had to take it on a case-by-case basis. How many different variations you might have, consider that.

One of the problems originally was that an interstate line might run through 12 or 13 States and be faced with the probability of 12 or 13 different standards. The objective was to get a uniform set of standards for the natural gas pipeline industry.

Senator BEALL. Why couldn't the application of safety standards be made on a case-by-case basis during the course of the certification process?

Mr. MCGRATH. You're mixing apples and oranges there. The FPC has standards or regulations involving the filing of applications, quantum of proof that the applicant must present to get a certificate. If the applicants don't conform to that process, then the applications are denied or kicked back or what have you.

In the Office of Pipeline Safety, if a given facility does not meet the standards that the OPS has set that facility has to be modified or changed to conform to the standard.

Now, there is not a certificate of public convenience and necessity in OPSO as you have with FPC. So in a way, you're mixing apples and oranges there.

Senator BEALL. Maybe I am, but it seems that the public interest would be served if at the time the certification was made to put a pipeline in place, that it has to meet all of the safety requirements and any special specification that may be required as a result of a particular circumstance surrounding this particular pipeline.

Mr. MCGRATH. The pipeline companies have to certify to the FPC as part of their application filing that whatever facility they construct conforms with the Federal safety standards. Now, if there is a special situation I'm sure that if appraised of that situation that the DOT in consultation with FPC and the companies, would work out a solution to it. The companies do certify to the FPC—a regulation that requires the applicants to certify to the FPC that they are in conformity with the safety standards so there is no gap.

Senator BEALL. Do you think the OPS has sufficient personnel to handle this responsibility at the present time?

Mr. MCGRATH. No, I do not. I point out in my testimony that the OPS is grossly undermanned. The Congress should address that problem and try to provide personnel to do the job. It is doing a good job with what it has available to it now.

In regard to S. 2042, we do not support the passage of this legislation. We feel that the provisions of this bill are really already covered by existing statutes and we see no major problem that this bill will cure that isn't being addressed already.

As Mr. Jennings mentioned yesterday, it is implementation of the administrative authority already granted by the statute that may be lacking rather than the lack of authority itself.

In my statement we cover a number of comments on the bill but let me mention just a few here. Section 2 would require pipeline operators

to give special consideration to the design of facilities located where subsequent excavation is likely to occur.

This would be difficult if not impossible to translate into meaningful regulations. If the probability of subsequent excavation activity is obvious, the companies are required by existing standards to design their facilities to take that into account. If you're in a less obvious location, say, a rural or fringe area, it is difficult to determine what will happen in the future. A farm today may well be a shopping center or apartment complex several years down the road.

To require the companies to speculate in every area where this may occur would be a tremendously costly burden.

We question the wisdom of specifying areas of research that DOT should get into. This is in the bill, also. DOT presently has the authority and is engaged in research.

We think that setting out specific areas for study may have two very undesirable effects. First, it requires research where it is not needed and second, prohibits or limits research where it may be needed.

One of the more difficult problems we have with the bill is the blanket requirement for reporting all leaks. This is a very complex question and one which could be misleading to the uninformed. I appreciate the Senator's concern for it.

Theoretically, any leak or unattended escape of gas, if left unattended, could create a hazard to persons or property. But from the transmission industry point of view, by far the majority of leaks are either inconsequential or are incidental to the pipeline operation. For example the escape of gas through valve stem packing or through compressor rod packing is a common occurrence. Routine daily maintenance by experts constantly repairs and checks leaks of this nature.

We do not think that the thousands of such minor-type leaks should be reported. We went through this with DOT 4 years ago. We submitted our comments and, after careful consideration, the DOT prescribed the present leak report system. We think the leak report for transmission lines as set forth in the DOT's regulations provides ample protection to the public as well as adequate reporting to the OPSO.

We do favor S. 2183. We think this bill will assist the Secretary in carrying out his responsibilities under the natural gas Pipeline Safety Act and is a step in the right direction in eliminating overlapping jurisdiction between FPC and DOT.

We have one major concern with the bill and that is section 2(1) and (2). By far the majority of direct sales lines on interstate pipelines today are what we refer to as jurisdictional facilities. They are certificated by the FPC. They are, and historically have been, an integral component of the pipeline system of companies having direct sales laterals. They are subject to DOT insofar as safety requirements are concerned.

We believe this arrangement is highly desirable and in the public interest. Again, interstate pipelines should not be subjected to multiple standards adopted by the various States through which a pipeline may run.

It's contrary to the intent of Congress in passing the Pipeline Safety Act. Congress set up one agency which would have the responsibility for promulgating and enforcing safety standards on the interstate pipeline systems and these laterals are part of the interstate pipeline

systems. We have language in my statement which we would recommend to the committee for including in the bill to cover this point, and with that, Mr. Chairman, I conclude my testimony.

I thank you very much.

Senator BEALL. Do you support the provision of S. 2042 that mandates the Technical Advisory Committee meet twice a year?

Mr. MCGRATH. Conceptually, we would. I don't know about the twice a year.

Senator BEALL. Do you think they ought to meet more than twice a year?

Mr. MCGRATH. Maybe two a year would be sufficient. We feel greater use should be made of the committee. If Congress thinks twice a year would be appropriate, we would go along with that.

Senator BEALL. I appreciate your testimony about the emergency plans. I point out that although legislators as a class don't like to get too specific in legislation, when you press upon the administrators of the program the necessity of taking action and you keep getting rebuffed, then sometimes your only resource is to look to the legislative process to get action.

We were concerned about the administrative emergency procedures and wrote DOT last July. They replied by stating Webster's definition of "emergency" and by indicating their belief that the DOT regulations were adequate within that definition. I don't think that is an adequate answer. If that is the kind of response we get from an executive agency, we have no alternative but to take legislative action.

If you will excuse me, there is a roll call vote on the floor and I will be back in just a minute.

[Recess.]

Senator BEALL. I apologize for the delay.

Mr. MCGRATH. Certainly I understand that, Senator. We are well familiar with that.

Senator BEALL. We talked about the Technical Advisory Committee. Do you think if it doesn't meet twice a year that it ought to be abolished? If the committee meets less than twice a year, is it of any use at all?

Mr. MCGRATH. If it meets less than twice a year, that is a subjective sort of thing. I'm not an advocate of holding meetings just to hold meetings. This committee has been delegated or designed by Congress to perform a function for the public and for the Office of Pipeline Safety.

If it were to meet two times a year, with—as a minimum, then it would be beneficial to the overall operation of the Office of Pipeline Safety. I sometimes personally, at least, am a little reluctant to put in a statutory requirement mandating that a certain number of meetings of this sort be held.

I would rather leave it to the administrative judgment of the administrators. However, in the past they have not held enough meetings or made enough use of the committee. Whether or not a statutory requirement to require this would be helpful I have my fears, but other than that maybe it is the thing to do. We don't feel really strongly about it.

Senator BEALL. The NTSB yesterday testified to the effect that they don't think the consumers have been educated to detect and report gas leaks.

Do you agree with this?

Mr. MCGRATH. That the consumer has not been educated to detect——

Senator BEALL. Detect and report gas leaks.

Mr. MCGRATH. I know the distribution arm of our industry has been conducting campaigns to acquaint the consumer with gas odors and leaks. I think it is an ongoing program. I think the educational process is still going on.

Whether or not the public is adequately informed today, I am not prepared to say. I know the industry is concerned about it and is working on it. It's more of a distribution problem than it is transmission.

I think the next witness may be better able to answer that question as to what is happening at the distribution level than I am.

Senator BEALL. Well, then, I'll ask the next witness.

Thank you, Mr. McGrath for your testimony.

MCGRATH. Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF JEROME J. MCGRATH, EXECUTIVE VICE PRESIDENT AND GENERAL COUNSEL, INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

My name is Jerome J. McGrath. I am Executive Vice President and General Counsel of the Interstate Natural Gas Association of America (INGAA), Washington, D.C. INGAA is a national organization representing virtually all of the major interstate natural gas transmission lines in the United States. Our companies account for 90 percent of all gas transported and sold in interstate commerce and all of our companies are subject to the jurisdiction of the Department of Transportation under the Natural Gas Pipeline Safety Act of 1968 (49 USC 1671, *et seq.*) insofar as safety matters are concerned, and to the Federal Power Commission under the Natural Gas Act (15 USC 717, *et seq.*) with respect to economic regulation. Every one of the lower 48 states with the exception of Vermont is served in whole or in part with natural gas transported by one or more of our companies.

We appreciate very much, Mr. Chairman, the opportunity to appear before your Committee to present our views on the matters now before you.

Let me say at the outset that safety in pipeline operations is and always has been a matter of prime concern and of top priority in our industry. Our pipeline companies recognize the need for good, workable, practical safety standards. To a very large degree this objective has been achieved by the Federal Pipeline Safety Standards adopted by the Department of Transportation except for several areas which I will discuss later. I wish to emphasize, however, that this has been accomplished at no small cost to the pipelines and the customers they serve. At the time the Pipeline Safety Act was passed in 1938 the industry was governed by the American Standards Association B31.8 Code for Pressure Piping. This was a good safety code but it has been substantially improved upon by the Federal Standards adopted by D.O.T. Since the new regulations were adopted in 1970, the pipeline industry has expended close to $400,000,000 in upgrading or modifying existing systems to bring them into compliance with the new standards.

The underground transmission of natural gas by pipeline is the safest, most efficient transportation system in operation today. I think a mere glance at the Transportation Accidents pie chart published by the National Transportation Safety Board and attached to my testimony will graphically attest to the fact that it is surely one of the safest modes of transportation. The industry, however, is continually looking into ways to improve and enhance the safety of pipeline operation. One death as a result of a pipeline accident is one death too many, but as you can see from the NTSB chart, fatalities by all

pipelines, both liquid and gas, in 1974 were so low as compared to other transportation modes as to be hardly noticeable on the chart. I might point out too that the 34 pipeline fatalities in 1974 are down from 66 in 1973. But more importantly, only four out of the 34 were as a result of gas transmission failures.

Now, I mentioned earlier that there were several areas in which prompt action by D.O.T. is needed and long overdue. The most important of these actions at this time is the establishment of offshore pipeline safety standards. This question has been pending before the Office of Pipeline Safety Operations (OPSO) and its predecessor for at least three years and perhaps longer. One of the major obstacles facing OPSO has been a running dispute with the United States Geological Survey of the Department of Interior as to which Department has jurisdiction over offshore pipelines. While it is our understanding that a Memorandum of Understanding between D.O.T. and Interior is under consideration, we would strongly urge this Committee, Mr. Chairman, to recommend legislation which would clearly establish safety jurisdiction over pipelines in the offshore areas in the OPSO of the Department of Transportation. In recent years the promulgation of various Outer Continental Shelf (OCS) orders by the USGS relating to gas pipeline safety has caused much concern and confusion within the natural gas transmission industry. While we question the authority of USGS under existing law to promulgate such safety standards, it is imperative that Congress act promptly to resolve the conflict and clearly establish offshore safety jurisdiction in D.O.T. under the Natural Gas Pipeline Safety Act. Obviously, it is not in anyone's interest to have two sets of regulations with which pipeline operators must comply in off-shore areas or anywhere else for that matter. In this regard, I think it is important to note that Sec. 6 of Senator Magnuson's bill, S. 2183, is very much in point although it deals with the jurisdictional overlap between the Federal Power Commission (FPC) and OPSO.

S. 2183 would prohibit FPC, under its certificate conditioning powers to require a pipeline applicant before it to comply with safety standards other than those prescribed by the Secretary of Transportation. INGAA strongly favors that amendment and we urge that a similar amendment be adopted not only with respect to conflicting Department of Interior offshore jurisdiction but to prevent any other Federal agency from attaching safety conditions to a permit, certificate, etc., other than those adopted by the Department of Transportation.

We believe D.O.T. should expend every effort to establish safety standards for liquefied natural gas (LNG) facilities at an early date. Here, again, there should be no dispute but that safety jurisdiction over such facilities is properly lodged with D.O.T. S. 2183 is directly in point here also and is entirely consistent with the recommendations of the Special Subcommittee on Investigations of the House Commerce Committee. In a report issued in March, 1974, on Legislative Issues Relating to the Safety of Liquefied Natural Gas Storage, the House Subcommittee strongly recommended that Congress make clear that OPSO has exclusive authority to impose safety regulations on pipeline facilities, including LNG. Secretary of Transportation Coleman in his letter transmitting to the Congresss the legislative proposals now embodied in S. 2183 makes specific reference to this situation. We agree.

At the time the Pipeline Safety Act was passed, one of its unusual and innovative features was the establishment of the Pipeline Technical Safety Standards Committee to assist the Secretary in evaluating gas pipeline safety standards. In INGAA's view, Congress made a giant step forward in making the regulatory process a more effective mechanism responsive to the need for developing and promulgating feasible, reasonable and practicable safety standards. To the extent the Committee has functioned since passage of the Act, it has performed its task well and has demonstrated the wisdom of Congress in establishing it in the first instance. Unfortunately, too little use of this Committee has been made in recent years and too few meetings have been held. This is regrettable since an active, responsive Technical Committee can contribute much to pipeline safety. We would hope that under the recent reorganization of the Office of Pipeline Safety, it will enable OPSO to make greater use of the Committee.

One of the major concerns the industry has with OPSO is the slow pace at which it proceeds in formulating and adopting safety standards. While OPSO is responsible in many ways for this situation, the greater responsibility, Mr. Chairman, lies with the Congress which for some inexplicable reason has consistently underfunded D.O.T.'s pipeline safety activity. As I am sure you have

heard in past oversight hearings, OPSO is grossly undermanned in relation to the important duties and responsibilities with which it is charged under the Pipeline Safety Act. Unless Congress approves a realistic budget for this activity, we do not see how there can be any measurable improvement in the performance of the Department's safety role. We would hope the Committee would give this question a long hard look as it formulates its recommendations to the Senate.

I would like to turn now, Mr. Chairman, to the bills before you, S. 2042 and S. 2183 and discuss them very briefly.

S. 2042

INGAA does not favor adoption of S. 2042. Lest we be misunderstood I wish to emphasize that INGAA does not quarrel with the basic objectives of the bill which is to promote greater safety in the construction and operation of gas pipelines. We are in complete accord with this objective. However, S. 2042 is a case of legislative overkill. The majority of the requirements proposed by S. 2042 are presently within the authority already granted OPSO by the Pipeline Safety Act. The major problem we see with the bill is that it is seeking by legislation to cure what are felt to be deficiencies in the regulatory program. While there may be deficiencies, these are matters to be addressed by the Secretary rather than in statutory codification of safety standards. Further, it will needlessly create more paper work for the government and for industry, more bureaucratic red tape and involvement than is necessary (all at the expense of the taxpayers) but with no truly offsetting benefits. In our opinion this bill will not result in any greater pipeline safety than can be achieved under present statutory authority and existing OPSO regulations.

I would like to offer the following comments on several provisions of the bill as illustrative of our concern.

1. Section 2 would require pipeline operators to give "special consideration" to the design of facilities located "where subsequent excavation is likely to occur." This would be very difficult, if not impossible, to translate into meaningful regulation. If the probability of subsequent excavation activity is obvious, such as in an urban area or developing suburban area, companies now give "special consideration" to this fact in the design of facilities as required in existing regulations (49 CFR Parts 192.03, 192.159 and 192.161). In less obvious locations, rural or fringe areas, we cannot envision what "special consideration" requirements might be specified. A farm today may well be a shopping center or apartment complex in five years or less. Certainly, the industry cannot be expected to forecast such developments and make appropriate provisions for the protection of new or existing facilities. In any event, the design criteria presently existing, as well as other related standards, adequately provide for protection in this regard. To require the type of speculative forecasting embodied in this provision would greatly increase the cost of constructing facilities without proven benefits.

2. Amending the statute to include "emergency plans and procedures" in Sec. 3(b) of the Act, is redundant and unnecessary for such requirement is presently covered in the regulations (49 CFR Part 192.615). We see nothing to be gained putting into the law that which already exists.

3. The proposal to require the Secretary to consider reports and recommendations of the National Transportation Safety Board would also appear to be redundant, particularly since this requirement is presently included in the provisions of the Independent Safety Board Act of 1974, 49 USC, Sec. 1906, and therefore does not need to be repeated here.

4. The proposed amendments to Sections 8 and 11 of the Act for filing emergency procedure plans and customer education plans will do little to improve pipeline safety. The regulations (49 CFR Part 192.615) now require each operator to have written emergency procedures and customer education programs. The filing of such plans and programs will not affect the way in which individual companies and employees recognize and respond to emergency situations. Emergency procedures depend on the type of operation, the operating area, the type of system, and many other factors which differ with each operating company. Because of this, OPSO staff personnel are truly in no position to evaluate the

effectiveness of any emergency plan. It would take a thorough knowledge of the operating procedures of each company. Speaking for the transmission industry, I can assure you that our companies are very much aware of the need for maintaining emergency plans and for keeping their customers informed. Writing the regulations into the statute will not improve the safety aspects of this requirement.

5. INGAA questions the wisdom of providing for specific areas of research to be formed by D.O.T. in the area of pipeline safety. The industry itself conducts much research in this area and furthermore, to the extent that further research is appropriate, D.O.T. already has the authority, in our opinion, and the legislative directive to conduct whatever research and development is necessary. Also, setting out specific areas for study may have two undesirable side effects, i.e., requiring research where it is not needed and prohibiting or limiting research where it might be needed. Section 7 of the bill would also provide new training authority for the Secretary. D.O.T. already has an operating training center and a functioning training program. There is no need for authorizing additional training programs or facilities since D.O.T. presently has ample authority to expand or contract its programs as it deems appropriate in the circumstances.

6. One of the more difficult problems we have with S. 2042 is the requirement that all leaks be reported to OPSO. This is a very complex question and one which could easily be misleading to the uninformed. Theoretically, any leak or unintended escape of gas could, if left unattended, create a hazard to persons or property, but by far the majority of leaks on transmission lines are either inconsequential or incidental to the pipeline system. For example, the escape of gas through valve stem packing or through compressor rod packing are common occurrences. Routine daily maintenance consistently checks and repairs leaks of this nature. We do not believe that S. 2042 intends that the literally thousands of such minor leaks which routinely occur on transmission systems should be considered as reportable leaks. Therefore, we would urge this proposal either be modified or deleted from the bill. In this regard, Section 191 of the regulations (49 CFR 191.1, *et seq.*) presently prescribes the criteria for reportable leaks on transmission lines and we believe the standards there set forth give ample protection to the public as well as adequate reporting to the OPSO on leaks which could or might pose a hazard to the public.

S. 2183

INGAA endorses S. 2183 with one modification. This bill will assist the Secretary greatly in carrying out his responsibilities under the Pipeline Safety Act and is certainly a step in the right direction, especially as it seeks to elimnate overlapping jurisdiction as between FPC and D.O.T. As I mentioned earlier in my statement we would urge the Congress to adopt similar legislation as it affects existing or possible jurisdictional conflicts in the offshore or Outer Continental Shelf areas.

The one concern we have with the bill is the provision (Sec. 2(1), (2)) which would remove so-called "direct sales" lines or laterals from the jurisdiction of OPSO. By far the majority of the direct sales lines on interstate pipelines today (over 90%) are what we refer to as jurisdictional facilities, that is certificated by the Federal Power Commission. As such they are, and historically have been, an integral component of the pipeline system of companies having direct sales laterals. As such they are subject to OPSO insofar as safety matters are concerned. We believe this arrangement is highly desirable and in the public interest and should be continued. To adopt this aspect of S. 2183 we think would be a step backward in the overall regulatory scheme envisioned by the Pipeline Safety Act and contrary to the express intent of Congress when it passed that Act—that interstate pipelines should be subject to one set of safety standards promulgated and administered by a single Federal Agency rather than a multiplicity of standards adopted by the various states through which a pipeline might pass. We do not see any advantage or public benefit in such a system and it would be extremely burdensome on the pipeline industry. We recommend the bill be modified by inserting after the words "pipeline facilities which transport gas from an

interstate pipeline to a direct sales customer purchasing gas for its own consumption" the words "*which pipeline is owned or operated by the customer.*"

I thank you, Mr. Chairman, for permitting INGAA to submit these comments on this important subject.

APPENDIX A

NATIONAL TRANSPORTATION SAFETY BOARD, WASHINGTON, D.C.

OFFICE OF THE CHAIRMAN: Nearly 10,000 fewer persons died in U.S. transportation accidents in 1974 than in 1973, according to preliminary statistics released today by the National Transportation Safety Board.

With highway deaths down sharply, the toll in all transport modes dropped from 60,356 to 50,541. This total was the lowest in a decade, and the 16 per cent reduction was unparalleled since World War II.

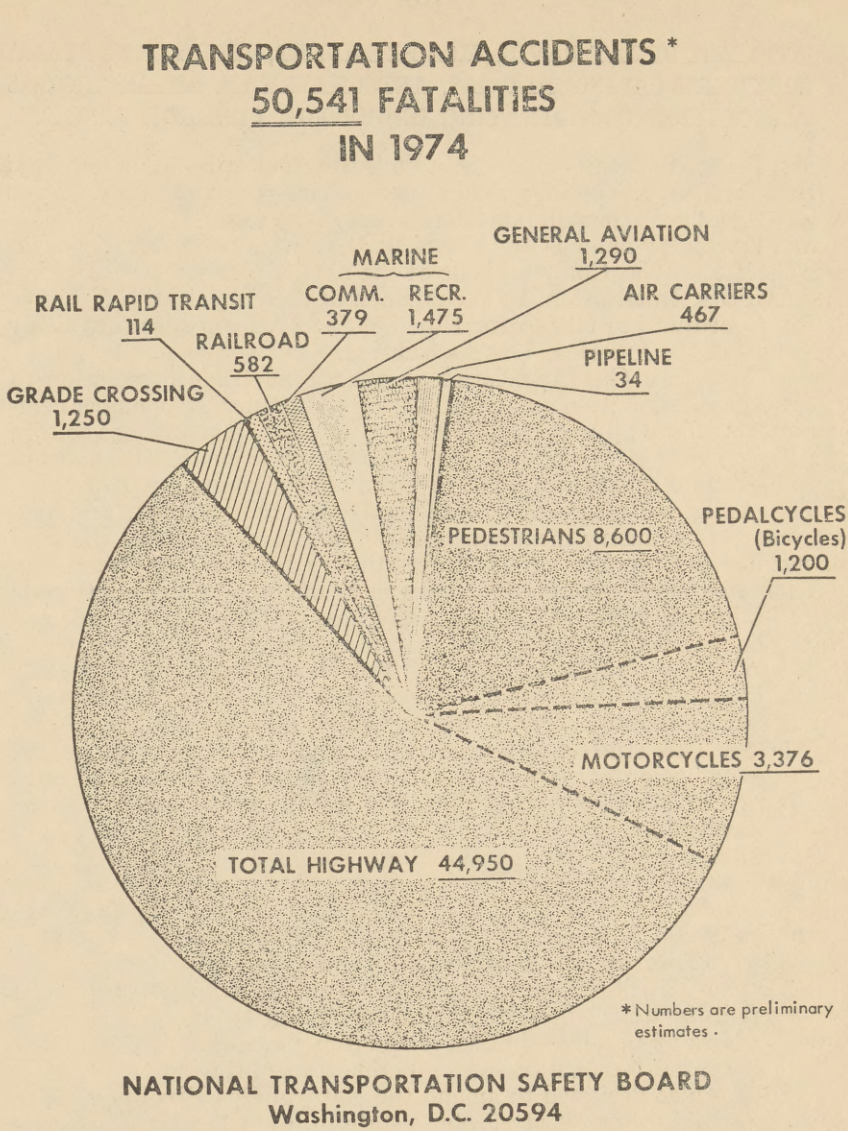
Highway deaths, which always account for more than 90 per cent of all U.S. transport fatalities, were down 18 per cent—from 55,800 to 46,200. Of these, 44,950 were highway crash fatalities and 1,250 were deaths on grade crossings in 1974.

Safety Board Chairman John H. Reed, in releasing the statistics for Transportation Week (May 11–17), said the Board "is at once encouraged and apprehensive. Whatever the exact reasons prove to be, thousands of lives now are being saved on the nation's highways. Recent monthly totals, however, suggest that an upward trend may again be developing. Any permanent retrogression would be a national tragedy."

Three other modes of U.S. transportation also registered substantial fatality reductions in 1974. Pipeline deaths dropped 48 per cent, from 66 to 34; recreational boating deaths were down 16 per cent, from 1,754 to 1,475; railroads achieved a 13 percent reduction, from 668 to 582.

Air carrier fatalities more than doubled, rising from 227 to 467. Deaths in commercial marine accidents rose 16 per cent, from 320 to 379. Totals in all other modes varied less than 10 per cent between 1973 and 1974.

The Safety Board's 1974 statistics were issued in the form of its annual pie chart of transportation fatalities. It shows these estimated 1974 fatality totals by mode, with comparative 1973 figures in parenthesis: highway—44,950 (54,615); rail-highway grade crossings—1,250 (1,185); railroad—582 (668); rail rapid transit—114 (109); marine—379 (320) commercial and 1,475 (1,754) recreational; aviation—467 (227) air carrier and 1,290 (1,412) general aviation; pipeline—34 (66).



Senator BEALL. Our next witness is Jay Davis, Vice President of the Operations Staff of the Southern California Gas and Chairman of the Coordinating Group for Pipeline Safety of the American Gas Association, speaking on behalf of the American Gas Association.

Mr. Davis, we are happy to welcome you to the committee. I suspect you wish you were back in California with weather like this.

STATEMENT OF JAY DAVIS, VICE PRESIDENT, OPERATIONS STAFF, SOUTHERN CALIFORNIA GAS, AND CHAIRMAN, AMERICAN GAS ASSOCIATION COORDINATING GROUP FOR PIPELINE SAFETY

Mr. DAVIS. We have trouble on a little different order. You may say.

Senator BEALL. You may read or summarize your testimony. If you wish to summarize it we'll put the full text in the record.

Mr. DAVIS. My name is Jay Davis, Jr. I am vice president of Southern California Gas Company, one of the nation's largest gas distribution utilities. In addition, I am chairman of the American Gas Association Coordinating Group for Pipeline Safety. I am speaking today on behalf of the American Gas Association.

The American Gas Association is a national trade association of natural gas distribution and transmission companies. Its member companies distribute approximately 90 percent of the natural gas sold in the United States. The association, since its inception, has been a supporter of all efforts towards improved public and employee safety.

The American Gas Association has sponsored, funded, and disseminated to industry members research and studies within the field of natural gas pipeline safety. Our industry has also supported and participated in the continuing development of the pipeline safety code since its inception in 1951. The effectiveness of this effort is reflected in the outstanding safety record of our industry. This record is attested to by a recent Department of Transportation sponsored study entitled "Study to Evaluate the Tools and Procedures for Assessing the Safety of Existing Gas Distribution Systems" (AMF Inc., January 1975). This study holds that the hazard spectrum with respect to the distribution of natural gas, is considered negligible and only one-fourth of the level for possible fatalities associated with routine day-to-day living.

S. 2183, introduced by Senator Magnuson, is a bill to clarify and strengthen the Natural Gas Pipeline Safety Act of 1968. We support this bill since it clarifies that the safety standards of the DOT are the only Federal pipeline safety standards that an interstate operator need meet. However, we do believe that the definitions of "interstate transmission facilities" and "intrastate pipeline transportation" as proposed in section 2 need further clarification to assure that only those sections of pipeline that serve the direct customer are included within the definition of intrastate pipeline transportation.

S. 2042 is also designed to amend the Natural Gas Pipeline Safety Act of 1968. However, it attempts to state in law what already exists in Federal standards and attempts to freeze into law certain research targets that now are the Secretary's authority and should remain his authority subject to congressional overview.

Section 5 amends section 11 of the 1968 act basicaly to add requirements for: filing of plans for emergencies, and for customer education regarding reporting gas odors and leaks; maintenance of a log of leak and emergency reports; and specific consideration of reports and recommendations of the NTSB by agencies in determining the adequacy of such plans.

With respect to establishment of standards for emergency plans and procedures, this provision simply is duplicative of present requirements established on March 20, 1975, when the DOT issued

proposed rulemaking revising part 192.615 to clarify and delineate the existing requirement that an operator prepare and execute an emergency plan. This amendment to the act therefore merely requires the filing of such plan. The filing of these plans, particularly emergency plans, will serve no useful purpose, will expand even further the paper flow in the regulatory agencies and will inhibit constructive changes to existing plans. Maintaining these plans for inspection by the Secretary, instead of filing these plans, is sufficient.

The requirement of maintaining a "log" on all leaks or emergencies is founded upon a desire to have a record of the receipt and handling of each leak and emergency report. The employment of the term "log" is unfortunate in that this term connotates one bound listing of all leaks and associated data. Such a "log" is not necessary to satisfy the intent of this amendment. Work orders for all leak and repair orders are presently available for inspection. Also a single "log" would be impractical for large companies where such reports are processed at different work centers depending on the geographic location. Therefore, the terms "maintain a log" should be deleted and replaced with language requiring the establishment of a system which which would show the receipt and handling of each leak and emergency report.

An additional requirement is that to determine the adequacy of these plans, relevant pipeline data including the reports and recommendations of the National Transportation Safety Board were to be required to make recommendations only to the DOT, then such recommendations would be reviewed by the Technical Pipeline Safety Standards Committee and others. This would provide a means of testing National Transportation Safety Board recommendations and a semblance of due process. Currently the NTSB makes recommendations to many parties. To require that these recommmendations be classed as relevant safety data denies due process and also assumes that the NTSB is infallible. There is no reasonable way available to test the soundness or adequacy of recommendations made by the NTSB to parties other than the DOT.

Several problems are evident in the proposed amendments in section 7. First, this proposed amendment does nothing but specify and limit research and development to particular areas, plus the catchall in the new subparagraph 10. This amendment does not appear to add anything to the authority of the Secretary as granted in existing section 13(a). It also definitely infringes on the flexibility of the Secretary in determining research and development programs to be supported. Again, the class of entities the Secretary may contract regarding research, testing, and development is very restrictive. A modification of the term "individuals" to "persons" would expand this class to include the now restricted private for profit entities.

The provisions requiring the development of minimum qualifications for inspectors and other field personnel should be qualified by the terms "employed in the pipeline safety field". Such a modification would provide uniformity with the immediately preceding language concerned with the specialized training for personnel employed in the pipeline safety field. It would also avoid the implication that the DOT should establish training requirements for all phases of field work.

This section would add an additional requirement that the annual report to Congress contain thorough compilation of "leaks". Current reporting regulations as set forth in CFR part 191 requiries that "leak repairs" be reported in operator annual reports to the DOT. We are of the opinion that S. 2042 should reflect this current reporting practice and the use of the term "leak repairs" instead of "leaks".

The requirement that the Secretary include in his annual report under the Natural Gas Pipeline Safety Act all recommendations of the NTSB is redundant. The National Safety Board Act requires that the Board itself make such a report to Congress each year. It must also be recognized that the NTSB presently makes numerous recommendations to many entities [individual companies, State regulatory agencies, the American Society of Mechanical Engineers Gas Piping Standards Committee, etc.] The list reported by the DOT should at least be liimted to relevant material. This could be accomplished by limiting recommendations to those made to the DOT.

We feel that the Independent Safety Board Act of 1974 and the Natural Gas Pipeline Safety Act of 1968 as would be amended by S. 2183, make the best means of monitoring and improving pipeline safety. Two examples of this continuing progress in the area of pipeline safety are the recent action by the DOT in sponsoring the previously cited AMF study on tools and procedures and an Oklahoma University study entitled "Analysis and Management of a Pipeline Safety Information System," dated October 1974.

On behalf of our member companies, I would like to thank you for this opportunity to be before you today and assure you of our desire to cooperate in the improvement of safety within our industry.

Senator BEALL. Thank you, Mr. Davis. I think I should point out that the AMF study you referred to was mandated by legislation. Some of us were disturbed about the lack of progress in certain areas of the gas pipeline safety program and in the DOT appropriations bill for fiscal 1974, we specified by amendment that these studies should be done.

There has been a lot of criticism of legislation around here. But, to repeat, sometimes that is the only way to get them done. Although I would like to give DOT credit for things they do, they didn't do this voluntarily. They did it because the law said they had to do it.

Mr. DAVIS. The law established the funding which I think was a great step. I think they chose the people to do it.

Senator BEALL. Fairly recently, there was an explosion in Pennsylvania in which an individual lost his life and a home was destroyed. It appeared that company personnel had been on the scene 2 days prior to the explosion.

We note in a NTSB 1974 report on a pipeline accident in Clinton, Mo., they stated "In at least 5 recent pipeline accidents [including this accident] on which the NTSB has issued reports, the pipeline operator's personnel were at the leak site from 10 minutes to more than 90 minutes before any explosions occurred. In each case there should have been sufficient opportunity to prevent an accident. In none of the cases, however, was the flow of gas turned off, and in four, nearby buildings were not checked for the presence of gas before the explosions. As a result of the accidents, 19 persons died.

Although we hear testimony that accidents as a result of natural gas explosions are few, but when they occur, they can be devastating.

Of those that happened, it seems quite a few were after visits by company personnel in time to prevent an explosion. Steps were not taken that might have been taken. I'm not saying, should have been taken, but might have been taken. I wonder why these things occur and what we should be doing to prevent occurrences of this sort.

Mr. DAVIS. I would like to comment on two aspects of that, Senator. To the best of my knowledge, most of the accidents that NTSB has made investigations and reports and recommendations on, involve people being on the scene and for whatever reason, perhaps inadequate training, they did not make what would be termed a very simple perimeter check. They assumed that this leak or break that they saw was the total entity of the problem. I have lectured to our member companies and everywhere that I can, that one of the requirements of any kind of leak investigation is a simple perimeter check. I think if you go through the reports you cited and others, beginning with Annandale, that a perimeter check would have meant quite a number of people would still be living.

I can understand how this happened. It is a training point. As far as I know, other than the quote you read from NTSB, it has not been a recommendation from NTSB that a perimeter check be instituted. I think the record, as supported by the AMF study, indicates there is a satisfactory record. I think the analysis of the incidents by the University of Oklahoma indicates that even though we have a good benchline that there are areas where we can seek improvement, I think you will find in most of the cases that probably 10 percent of the instances cost areas will account for some 60 to 70 percent of the problems. It is rather typical in any kind of situation of this kind. I think the University of Oklahoma study indicates that is true here.

Senator BEALL. The University of Oklahoma studied certain operators who have problems?

Mr. DAVIS. Yes.

Senator BEALL. Does OPS examine those operators as a result of that study at all, more frequently or not at all?

Mr. DAVIS. I can't answer that. I just got a copy of the study rather recently. As far as I know, I have heard nothing from OPS as to what they are doing or intend to do. There is no reason why they would have notified me.

Senator BEALL. Does your association have a program developed to inform operators of their responsibilities, to conduct good training programs?

Mr. DAVIS. Yes.

Senator BEALL. You provide help for those people who seem to need it more than others.

Mr. DAVIS. We have done a lot of work in that area in how-to manuals, guidelines, and there is a lot of work in association publications. There is know-how transmitted in association meetings.

Senator BEALL. Who are those identified as having a less safe operation, the small operators, or the large operators?

Mr. DAVIS. In the Oklahoma University report they are identified only by code. I would have to guess. OPS has the code numbers. I do not.

Senator BEALL. Would you say at this point, that the Government's efforts to regulate the people who seem to be deficient is less than satisfactory or something less then it should be?

Mr. DAVIS. I think they just recently got the information that here is an area where they might apply their time.

Senator BEALL. Do you think OPS has sufficient personnel to do a good job?

Mr. DAVIS. Senator, I guess in this cruel world, whether you are in business or whether you are in government, you never have enough people to do what you would like to do. You have to do the best job you can with the people you do have.

I don't know what the staffing requirements are at OPS.

I heard Mr. Jennings yesterday. I think highly of Mr. Jennings' know-how in this field. I would assume with the reports they now have in hand which obviously they did not have a few months ago, they now have a better way of utilizing their personnel or have a means of utilizing their personnel in a better manner than they had before

Senator BEALL. Do you think OPS should rely on the States to do this?

Mr. DAVIS. In the States. In a number of the States, regulations similar to the OPS regulations were in effect long before the National Gas Pipeline Safety Act.

Senator BEALL. Do you think as we look to the future that OPS can continue to rely on the States?

Mr. DAVIS. I don't know why not. At least in my State they are doing a good job.

Senator BEALL. Does your State have an adequate staff of inspectors?

Mr. DAVIS. Yes.

Senator BEALL. In my State I know there is only one. Maryland has 4 million people in it.

Mr. DAVIS. That sounds a litle thin, Senator.

Senator BEALL. A Prince Georges County task force investigated the Bowie explosion. They pointed out that both the Office of Pipeline Safety and the Maryland Public Service Commission had minimum personnel in the field, and little or no on-site inspection was carried out in Maryland to verify compliance regulations. Maryland has one pipeline inspector for the entire State. They implied that Maryland was representative of the States in this regard, although California may be better. I wondered if Maryland is representative of the States?

Mr. DAVIS. I don't believe the situation in Maryland—in the territory adjacent to Washington, D.C., is representative in quite a number of ways.

Senator BEALL. I note also that an NTSB study of the 1973 Charleston, W. Va., explosion was attributed to the fact customers were not aware of gas leaks.

NTSB concluded that this was partially a result of the fact that the gas company's educational program submerged warnings and instructions within promotional material not heeded by the customer and did not inform the customer of the possible consequences of failure to report a gas odor to the gas company.

Washington Gas Light Co. has done a good job of making the public aware of what they should be doing. What kind of comment would you like to make about this, as it applies across the country?

Mr. DAVIS. The association has developed and fostered an odor familiarization. It is a card to be mailed and distributed. It was a newspaper ad so that people would identify the odor. This has been used by quite

a number of member companies. Most companies that I am familiar with have gone beyond this with individual mailings of even in more than one language. A number of companies are combining in their market research the question as to whether people do recognize the odor of gas and, in particular, the most recent one in my company indicated that we had 98.2 percent perception.

We mailed the card hoping to increase that base line.

Senator BEALL. You probably heard me ask the previous witness, Mr. McGrath, about the fact that NTSB testified yesterday that consumers have not been educated to detect and report gas leaks. To your knowledge, does OPS point out to distributors the good educational programs that are going on around the country and suggest to them that they follow these kinds of procedures or programs? Does your association notify your members of the kind of programs that they ought to be engaged in to educate the public in detecting gas leaks?

Mr. DAVIS. The association, national and regional, has been active in this program, in calling attention to it, exchanging know-how and, Senator, it's been going on for so many years. I really do not recall at the moment whether it was initiated by OPS or whether it was really initiated—I think the gentleman from NTSB was misinformed.

Senator BEALL. In the University of Oklahoma study, they point out that "in distribution mains the leak rate for systems installed in the 1970's was significantly higher than the leak rate for the previous two decades." I am wondering why that would be.

Mr. DAVIS. I think they also indicate that the record is rather sparse. So that perhaps there is no direct conclusion. I think there is a hypothesis that would perhaps explain it. In any new installation, relatively new, first 10 years of the life of a distribution facility, you probably have more people working over and around the facility than in the next 30 years of its life. So that I would expect——

Senator BEALL. That's the outside force?

Mr. DAVIS. Yes.

Senator BEALL. What can we do to improve that?

Mr. DAVIS. The best thing that I know has been to intensify the work on the one call system. This has about the best effect that I know of that anybody has come up with to date. It is no panacea, I'm sure. Third party damage is a great burden on the industry financially. It is a great hazard to the populus. It probably doesn't come with really top-flight recognized contractors. It comes by the little guy.

Senator BEALL. NTSB endorsed the one call system on a voluntary basis. Do you think it should be voluntary or mandatory?

Mr. DAVIS. I haven't any background experience that I can report. I guess the rationale tells me that a voluntary system will catch the guy who probably isn't really the major source of damage to us anyway. The guy that is more prolific in damaging us is the little guy who won't know anything about a one call system. If you had a mandatory system of some kind, you probably are coming closer to a solution to the problem. I think the work in Michigan with the Michigan PUC and really the whole State getting into the act along with the utilities is a commendable effort and I think that took 5 years or more to get a mandatory system.

Senator BEALL. They have a statute in Michigan?

Mr. DAVIS. Yes.

Senator BEALL. I think there is a general agreement that excavation damage is probably the greatest single threat to pipeline safety. It is also a hazard and problem for other utilities such as the phone company and electric company. Do gas companies, phone companies, and electric companies get together and try to work in seeking a solution to the subsurface damage problem? Do you cooperate with each other?

Mr. DAVIS. Both locally and nationally, I think the gentleman testifying for NTSB mentioned the subsurface committee operation which to the best of my knowledge was probably started at Los Angeles with an effort that we funded. Know-how in the area is available and literally should be utilized.

Senator BEALL. In S. 2042, we mandate the formation of a statewide utility coordinating council which would have the responsibility of encouraging and promoting local utility councils in areas of the State where excavation damages represents a significant problem and who would be required to encourage and promote damage prevention programs on a cooperative basis and if necessary by State and local legislation. This is an effort to keep it voluntary but at the same time to get at the problem by recognizing that the local public service commission or the local regulatory authorities have some hand on all of the utilities in their State and may be able to bring them together.

Do you think this is a worthwhile approach?

Mr. DAVIS. Senator, I am all for the objective. If I remember the provision in the bill, I would wonder whether some States would say we will not apply for certification under OPS because this is an additional requirement imposed on them without funding. I could do nothing but wholeheartedly support the direction of one call and trying to find some solution to the third party damage.

Senator BEALL. Is this type of program so important that the Federal Government should be funding the council?

Mr. DAVIS. Well, currently in my area, my company is paying the bill, trying to get it started.

Senator BEALL. Help both the State and Federal Government?

Mr. DAVIS. It is a voluntary plan and we think it is important and so we are funding it, my company.

Senator BEALL. Does your association advise this kind of thing nationwide?

Mr. DAVIS. Yes; we have a committee who has actually been active in acquiring information, making the information available to member companies on the details of various plans going State by State.

Senator BEALL. In the one that your company is involved in, are all the utilities in it?

Mr. DAVIS. I wish I could say yes. We have some that don't think they should get in.

Senator BEALL. Why are they reluctant to do it?

Mr. DAVIS. I could hazard a guess. I think they fear they will be called upon to locate—give locations more time than they can man.

Senator BEALL. They think it is more your problem than their problem?

Mr. DAVIS. Well, I am funding it so I guess the answer is yes.

Senator BEALL. Yesterday, Mr. Bonner of New York State expressed concern about the potential safety hazards of gas distributions beyond

the master meter. Could you discuss what your members are doing to insure the safety of these systems?

Mr. DAVIS. Systems in my area are controlled by local codes and requirements.

Senator BEALL. Do you think that is the way it should be?

Mr. DAVIS. I think that is the way it should be. It has been satisfactory over the years.

Senator BEALL. Is it adequate from a safety point of view?

Mr. DAVIS. Yes, very adequate. Most plumbing codes will not permit a repair. It would require replacement. Probably a repair could be made but it is fixed in the plumbing codes that they cannot make a repair.

Senator BEALL. For the record, in March OPS issued a notice proposing amendments which would provide more detail for emergency plans. Would you respond for the record as to what you think of the emergency plans amendments and whether they are deficient?

Mr. DAVIS. I talked in my testimony to the requirement for filing a set of plans.

Senator BEALL. We are talking about the specific plans here.

Mr. DAVIS. The plans for my company would be in excess of 100 pounds—100 pounds would make a bookshelf of 8 to 10 feet. You multiply that by other companies on the thing. I suspect you're talking somewhere in 20 to 25 people to maintain the files at one central location, which is quite a complex order. I don't think they are meaningful unless you take the plan and go to the location. If it is an emergency plan for a compressor plan or particular pipeline——

Senator BEALL. You're talking about the requirement to file. I am talking about what should be in the plan. In other words, yesterday Mr. Jennings commented on the OPS proposal, the proposed amendment. I would like your comments not necessarily today, but for the record, as to your feeling on these particular proposals, the contents of them.

Mr. DAVIS. Points to be covered. We have a mass of material on that.

Senator BEALL. Mr. Jennings said it doesn't define an emergency and it doesn't specify the scope of action which the operator's employees must take on arriving at the site of the emergency. I would like whatever comments you have in that regard.

Mr. DAVIS. I thought that was amended in the March rulemaking. I would be glad to supply that for the record.

Senator BEALL. Fine. Thank you very much, Mr. Davis, for your testimony.

We are adjourned.

[Whereupon, at 11:50 a.m., the hearing was adjourned.]

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

OCTOBER 2, 1975.

HON. VANCE HARTKE,
Chairman, Senate Commerce Subcommittee on Surface Transportation,
U.S. Senate,
Washington, D.C.

DEAR SENATOR: This letter will supplement my testimony regarding Senate Bills 2042 and 2183 which was presented on Friday, September 26, 1975, before the Senate Commerce Subcommittee on Surface Transportation of which you are chairman. The American Gas Association is firmly of the opinion that the

regulations promulgated by the Material Transportation Bureau, under the Department of Transportation, pursuant to the Natural Gas Pipeline Act of 1968, should be the only safety regulations applicable to pipelines and gas facilities.

Where a project is designed to meet all the requirements of the Federal agency charged with the specific responsibility for pipeline safety, no other agency should be permitted to require additional work. Instances have occurred where the Federal Power Commission, without previously establishing any standards or rules of their own to be followed, have made certificates of public convenience and necessity contingent upon specific one-time design requirements or rulings. Said design requirements or rulings are not made until after a project has been designed in accordance with existing, established standards. If the Federal Power Commission were to establish regulations with provisions to be taken into consideration during the planning stage, such regulations could be tested in the prescribed Federal rulemaking procedure. Since the Federal Power Commission has not indicated any inclination to formally establish standards in its many years of expeirence, we believe that Section 6 of S. 2183 must be retained.

During Friday's hearings, it was not emphasized that the existing Department of Transportation Safety Standards have been written as performance standards. This may have led to the erroneous conclusion that existing safety standards are so broad that there is little or no specific consideration given to differences in location, the geography involved or the population density in the area, and further that in designing a pipeline each company can choose for themselves how much consideration should be given specific conditions surrounding that pipeline. These conclusions are not based on fact. The standards themselves provide specific requirements that have been designed to cover just such contingencies. The standards are and should be expressed in performance terms stating the specific factors that must be determined and provided for in the facility design. Thus, an operator must determine weather forces, soil conditions, earthquake potential, flood potential, anticipated rain fall, etc., and provide for these hazards in each facility design. The extent of probable hazard beyond the facility boundaries must also be determined. All of this is in addition to the requirements in the standard affecting equipment and component selection, disposition, and protection.

For example, Section 192.5 of the regulations establishes four class locations which are based on population density and proximity of pipelines to buildings. Application of these class locations in design of pipelines is detailed under 192.111 in the regulations as indicated in the attached copies of these Federal standards.

The above, I believe, will clarify why the American Gas Association believes that the Material Transportation Bureau regulations are, in themselves, all that is required to assure pipeline safety, and that imposition of additional regulations by another agency would tend to hinder rather than assist in reaching the highest attainable level of pipeline safety possible.

I will be pleased to provide any additional information you desire.

Sincerely,

JAY DAVIS, Jr.

Attachments.

AMERICAN GAS ASSOCIATION,
Arlington, Va., October 2, 1975.

Hon. JAMES GLEN BEALL,
Senate Commerce Subcommittee on Surface Transportation,
U.S. Senate,
Washington, D.C.

DEAR SENATOR BEALL: During my presentation on behalf of the American Gas Association before the Senate Commerce Subcommittee on Surface Transportation oversight hearings on September 26, 1975, I agreed to provide you with the Association's recommendations relative to the "Emergency Plans" question.

As stated, we believe the information provided in the Association's response to Docket No. OPS–32; Notice No. 75–1, Emergency Plans, (copy attached) together with the ASME Guide material dated March 1975 (copy attached) satisfactorily covers this subject.

Again, may I express my appreciation for the opportunity to appear before the Subcommittee, and assure you of the Association's continued interest and support of efforts toward improvement in pipeline safety.

Sincerely,

JAY DAVIS, Jr.,
Chairman, A.G.A. Coordinating Group for Pipeline Safety.

Enclosures.

AMERICAN GAS ASSOCIATION,
Arlington, Va., May 6, 1975.

Mr. JOSEPH C. CALDWELL,
Director, Office of Pipeline Safety,
Department of Transportation,
Washington, D.C.

DOCKET NO. OPS–32; NOTICE NO. 75–1, EMERGENCY PLANS

DEAR MR. CALDWELL: The American Gas Association is the national trade association for the natural gas distribution and transmission industry. Its members' companies handle a large majority of the natural gas distributed in the United States.

The A.G.A. Coordinating Group for Pipeline Safety, on behalf of the Association's member companies, submits the following comments with respect to Docket No. OPS–32; Notice No. 75–1, Emergency Plans.

The A.G.A. Coordinating Group on Pipeline Safety supports the position taken by the ASME Gas Piping Standards Committee in its response on the subject Docket and Notice. In addition, it is believed that the March, 1975 Addendum to the ASME Guide for Gas Distribution and Transmission Piping Systems adequately instructs people in the key points in developing a sound Emergency Plan.

While the Coordinating Group supports the ASME position, the following is also presented for your consideration.

192.615 Emergency Plans

A gas pipeline emergency, as used in this section, is any situation in which people and/or property are in jeopardy due to the inherent combustibilty of an uncontrolled escape of gas.

(*a*) Each operator shall establish and maintain a written Emergency Plan to provide for a prompt and effective response to gas pipeline emergencies. The plan shall give priority to the protection of human life and then to the minimization of property damage. At a minimum the plan shall include:

1. A method to receive and identify calls and notices which require prompt response by the operator.
2. Procedures to rapidly mobilize personnel and equipment required to respond to such a notification.
3. Effective means of controlling the escape of gas.
4. A prearranged procedure to acquire emergency assistance from other operators, contractors, and appropriate public agencies.
5. A procedure to review the plan annually.

(*b*) Each operator shall:

1. Provide means for receiving emergency calls and for an alternate method of communication with fire and police and other appropriate public officials when the method normally used is interrupted or overloaded.
2. Establish and provide to appropriate employees procedures necessary to fulfill their assigned responsibilities in responding to emergencies.
3. Train these employees in the application of the Emergency Plan.
4. Evaluate the effectiveness of the implementation of the Emergency Plan.

(*c*) Each operator shall establish liaison with fire, police, and other appropriate officials to:

1. Acquaint them with the operator's ability in responding to an emergency.
2. Identify the types of gas pipeline emergencies in which the operator will notify the officials.
3. Provide for mutual assistance in an emergency.

(*d*) Each operator shall establish a continuing educational program to enable customers, the public, appropriate government organizations, and persons engaged in excavation related activities to recognize a gas pipeline emergency and report it to the operator or the appropriate public officials. The program must reach all areas in which the operator transports gas. The program must be conducted in English and in other languages commonly used by significant numbers of non-English speaking people in an area.

On behalf of our member companies, I want to thank you for the opportunity to respond to this rulemaking and for your consideration of the above.

Individual companies may be submitting their own comments.

Sincerely,

F. DONALD HART,
President.

GUIDE MATERIAL

A. Written emergency procedures

Written Emergency procedures should provide the basis for instructions to appropriate operating and maintenance personnel, emphasizing the need for immediate attention to assure the safety of the general public, and should include the following as applicable:

(a) Statement of Policy:

A statement of policy, including a definition of the term "Emergency", that is, the types of conditions under which an emergency exists and their classification.

The statement of policy should clearly indicate those responsible for updating the plan.

The statement of policy should clearly indicate the responsibility for employee training and instruction, on a continuing basis, regarding emergency plans and their execution at all levels and in all affected departments.

(b) Assignment of Responsibilities:

Provisions for the assignment of responsibility for coordinating, directing and performing emergency functions within the existing company organizational structure. These provisions should include the following:

(1) Responsibility for overall coordination, which may be at a local headquarters or at the operating executive level, depending on the scope of the emergency.

(2) Responsibility for execution of emergency operations, based on the scope of the emergency.

(3) Description of departmental functions or services during an emergency, including description of individual job assignments required to implement the plan.

(4) Preparation of a personnel notification plan including off-hour supervisory coverage.

(5) Description of coordination between departments, including provision for by-passing normal chain of command as necessitated by the emergency.

(6) Responsibility for providing the means of receiving off-hour calls from persons reporting emergency conditions.

(c) Handling and Evaluating Emergency Calls:

Provisions to assure prompt and adequate handling of calls regarding emergencies received from customers, the public, company employees or other sources, which should:

(1) Include directions to employees who receive calls regarding information to be obtained from caller.

(2) Include instructions to be given to caller.

(3) Designate the company personnel to whom information is to be directed depending on the type of emergency situation.

Provisions to assure that the information received from company personnel or other sources is evaluated for the purpose of determining the priority of action. Some situations may call for the dispatching of personnel for an on-the-scene investigation, while others of a more significant nature may dictate that priority first be given to notification of gas control, fire personnel, or some other action.

In addition, provisions should be established which will give recognition to the following considerations relevant to maintaining public communication accessibility:

(1) Additional telephone trunk lines to the headquarters.

(2) Additional switchboard facilities and operators.

(3) "Unlisted" service to assure accessibility to company-only calls.

(4) Additional fixed and mobile radio equipment to assure optimum communications ability.

(5) Standby electrical generating equipment for communications power supply.

(d) Controlling the Emergency Situation:

Provisions for controlling the emergency situation, including the action to be taken, by the first employee arriving at the scene. The following measures should be considered in developing these procedures:

(1) Evacuating premises which are or which may be affected.

(2) Blocking off an area.

(3) Rerouting traffic.

(4) Preventing accidental ignition.

(5) Ventilation of affected premises.

(6) Controlling the flow of leaking gas by closing valves or other means.

(7) Determining the full extent of the hazardous area, including the discovery of gas migration and secondary damage.

(8) Reporting to the appropriate headquarters on the situation, requesting further instructions or assistance if needed, requesting fire and/or police help if needed.

(e) News Media Communications:

Provisions for the dissemination of information to the public should include the following:

(1) Availability of accurate, correct and complete information to the news media.

(2) Cooperation with the news media on the scene.

(f) Restoration of Service:

Provisions for the safe restoration of service to all facilities affected by the emergency after proper corrective measures have been taken. The following measures should be considered in developing these procedures:

(1) Purging and repressuring of pipeline facilities.

(2) Resurvey of the area involved in a leak incident to locate any possible additional leaks.

(3) Turn-off and turn-on service to customers, including strict control of turn-off and turn-on orders to assure safety in the operation.

Execution of the repair and restoration of service functions will necessitate prior planning in areas, such as the following:

(1) Distribution sectionalizing to reduce extent of outages, and to expedite turn-ons following a major outage.

(2) Lists and maps for valve and regulator locations and blow-off or purge locations.

(3) Physical marking of valves and regulator facilities for positive identification.

(4) Equipment checklist for emergency crews.

(5) Instructions for operating compressor station blow-down and isolation systems for each station.

(6) Emergency supply connections with other gas companies, and procedures for making use of such connections.

(7) Listing of contractors, other utilities and municipalities which have agreed to provide equipment and/or men to assist with repair and/or service restoration.

(8) Procedures for securing manpower and equipment from own or other gas companies.

(9) Prearranged use of facilities, owned by others, for temporary operating headquarters for repair and/or restoration activities. Arrangements for all necessary support functions for such temporary operating headquarters.

(10) Cooperation with appropriate civil organizations in providing housing and feeding facilities for persons requiring shelter during an outage in severe weather.

(11) Arrangements to maintain service to critical customers, such as hospitals, to the degree possible during a general service curtailment or outage. Also, similar priority for turn-on activities.

(g) Reporting and Documentation:

Provisions for reporting and documenting the incident which should include the following:

(1) Obtaining and submitting information required by jurisdictional regulatory bodies.

(2) Keeping a log of all significant events and of corrective steps taken in restoring normal operations.

(3) Accident Investigation and Reporting Procedures—Sec. 192.617.

B. Acquaint appropriate operating and maintenance employees with the procedures

Each operator should have a program for informing, instructing and training employees responsible for executing emergency procedures. The program should acquaint the employee with the emergency procedures and how to promptly and effectively handle emergency situations. Said program may be implemented by oral instruction, written instruction, and in some instances group instruction followed by practice sessions.

Those responsible for instructing employees should place special emphasis on the following:

(a) Understanding of the properties and behavior of the gas, as related to types of potential hazard.

(b) Coordinated execution of the company's written emergency procedures.

(c) Knowledge of how emergency control is exercised in various sections of the system, including identification and operation of key valves.

(d) Responsibilities of each employee responding to an emergency and his relationship to the emergency procedure.

(e) Evaluation of reports of gas odor and other potential emergencies.

(f) Response to different types of emergency situations such as gas escaping inside/outside and gas burning inside/outside, including appropriate action such as ventilation, evacuation, gas shut-off, and other precautionary measures.

(g) Familiarization with tools and equipment appropriate to the particular function or situation.

(h) Fulfillment of the recordkeeping requirements called for under the written emergency procedures, including a log of the emergency and the validation and documentation of the corrective action taken.

The program should be established and maintained on a continuing basis with provision for up-dating as necessitated by revision of the Emergency Plans of Procedures.

It is also recommended that the operator maintain sufficient records to establish what training each employee received and the date of such training.

C. Establish liaison with appropriate public officials, including fire and police officials, with respect to the procedures.

Those responsible for establishing liaison with appropriate public officials with respect to emergency procedures should consider the establishment and maintenance of the following:

(a) Establishing and maintaining acceptable procedures to facilitate prompt communication in emergencies.

(b) Familiarization of persons responsible for public safety with the characteristics of the gas and precautionary measures to be taken in connection therewith. This program should be updated as required.

(c) Mutually agreeable means of controlling emergency situations such as:

(1) Gas escaping outside.
(2) Gas burning outside.
(3) Gas escaping inside.
(4) Gas burning inside.

(d) Participation in fire, police, and civil defense meetings, both on local and state levels.

D. Establish an educational program to enable customers and the general public to recognize and report a gas emergency to the appropriate officials

(a) The educational program called for under this section should be tailored to the type of pipeline operation and the environment traversed by the pipeline and should be conducted in each language that is significant in the community served. Operators of distribution systems should communicate their programs to consumers and the general public in their distribution area. Operators of transmission systems should communicate their programs to residents along their pipeline right-of-way. The programs of operators in the same area should be coordinated to properly direct reports of emergencies and to avoid inconsistencies.

(b) Communication of general information should include material such as: (1) Facts about the gas distributed or transported; (2) the importance of recognizing and reporting a gas emergency (3) how to report an emergency to the operator and (4) what action to take in an emergency or when gas leaks are detected.

(c) Communication of specific information should include means of recognizing potentially dangerous or emergency situations including typical indications. Such typical indications might include:

For Distribution Lines:

(1) An odor, suggestive or indicative of gas.
(2) A hissing or blowing sound, inside or outside.
(3) Fire at or near exposed piping or an appliance.
(4) Bubbling action of surface water outside.

For Transmission Lines:

(1) Blowing sound.

(2) Dirt being blown into the air.
(3) Water being blown into the air at a pond, creek, or river.
(4) Fire apparently emanating from the ground, or burning above the ground.
(5) Vegetation turning brown in or near the right-of-way.

(d) Educational programs should include action to be taken by the consumer and the general public or residents along the pipeline right-of-way in an emergency or when gas leaks are detected. The program should include instructions on who to notify for help, and in what sequence action should be taken. In preparing instructions, an operator should consider the following representative examples:

For Distribution Lines:

(1) Detection of a slight odor of gas in a small localized area of a building—avoidance of using a match or other flame to find the gas leak . . . immediate notification of the gas company.

(2) Detection of a strong odor of gas in a small localized area in the building—avoidance of operating electrical switches or lighting matches . . . opening windows and doors to ventilate the building . . . notification of the gas company.

(3) Detection of a strong odor of gas in the building generally and/or a hissing sound of escaping gas—avoidance of operating electric switches or lighting matches . . . evacuation of the building (leaving doors open) . . . warning persons in the immediate area to stay clear of the building . . . notification of the gas company immediately from another location . . . notification of the fire department.

(4) Observance of a fire in or near a gas appliance or piping—immediate notification of the fire department . . . notification of the gas company.

(5) Detection of a gas odor or gas fire in the premises—turn off gas at the gas meter and appliance, *only* if familiar with the valve operation. Each operator should weigh the merit and risk of instructing customers on how and where to shut off their gas service.

(6) Unusual noise at an appliance, or any unusual behavior of the flame on an appliance burner—notification of the gas company.

(7) Detection of an odor of gas outside, in the yard, in a sidewalk area, in a roadway, or in a field or wooded area—immediate notification of the gas company.

(8) Detection of an odor of gas where an excavation is either in progress or has recently been completed near the premises—immediate notification of the gas company.

For Transmission Lines:

(1) Detection of gas escaping from a pipeline:
(i) Shut down and abandon any equipment that may be in use.
(ii) Avoid open flame or other ignition sources.
(iii) Evacuate the area.
(iv) Warn others in the vicinity.
(v) Prevent automobiles and other motor vehicles from driving into escaping gas.
(vi) Secure the aid of local firemen and law enforcement officers to isolate the area.
(vii) Notify the pipeline operator.

(2) Detection of gas escaping from a pipeline and burning:
(i) Avoid attempts to extinguish the fire.
(ii) Avoid using water on the burning gas at the point of the fire.
(iii) Use water only on nearby buildings or other combustible material if necessary to prevent ignition by the heat of the fire.
(iv) Call for help to protect property from fire, if necessary, and to isolate the area.
(v) Notify the pipeline operator as soon as possible.
(vi) Avoid operating any pipeline valves.

(3) Detection of gas inside a building:
Refer to Guidelines on action to be taken in an emergency on Distribution Lines.

FRANKLIN NATURAL GAS SYSTEM,
September 29, 1975.

Hon. VANCE HARTKE,
U.S. Senator,
New Senate Office Building,
Washington, D.C.

SIR: It was a pleasure for me to be able to attend the hearing of the Surface Transportation Subcommittee of the Senate Committee on Commerce of the United States September 25, 1975, pertaining to the Natural Gas Pipeline Safety Act of 1968 as a spectator. Having operated a small distribution system for the City of Franklin, Tennessee, for approximately 19 years, and prior to that having worked for the Nashville Gas Company as a Construction Foreman for ten years I was very interested.

The subcommittee seemed to be asking why are almost every pipeline (all types) and gas distribution systems, have more leaks, more accidents, and more failures as time goes by. In my judgment there are several reasons, but one primary reason is that the cities and the world are getting larger all the time. It may not be obvious to the subcommittee that the world could grow larger but it is obvious, in many ways.

The members of the subcommittee as well as myself hear Astronomers talking about some planets being so many million light years distance away from the earth, a distance calculated in billions and billions of miles. Yet a few years ago you and I along with many others watched enthralled as Mr. Armstrong stepped on the surface of the moon. These illustrate my point, once upon a time, a star was a star, a tiny flickering lamp hung in the Heavens, now it is a world, a world whose dimensions, characteristics, and distance are known. So too, the transportation lines (regardless of the commodity transported) have moved farther and farther out to a new horizon. The old frontiers have been invaded thus making new fields for investigation a more trying task for NTSB and OPSO.

I was very impressed with Mr. John H. Reed's testimony, if I may I will refer to different sections and paragraphs. On page two, paragraph two, "A review of gas pipeline fatalities reported from CY 1968 to 1973 showed an increase from 16 to 59. This contrasts with a decrease in fatalities to 24 in 1974. In eight and a half months of 1975, there have been only four fatalities from gas and five from Liquefied Petroleum Pipeline Accidents." Senator, this brings to my attention rather quickly that the NTSB and or OPSO must be doing a very good job by implementation of minimum safety standards with limited resources. As I see the situation the same amount of gas and pressures are in the lines in 1975 as was 1968 to 1974. With the energy shortage it is highly possible that pressures could be greater and other information indicates to me that higher pressures are used. If the time and occasion arise, I would be glad to elaborate my reasons for believing the pressures could be higher. Now we shall refer to page three, paragraph two beginning with the second sentence, "The largest single cause of pipeline accidents is excavation damage. In the past few years it caused more than 40% of all pipeline accidents and 30% of Liquefied Pipeline Accidents." Week after week damage that does not cause fatalities or explosions in systems does not have to be reported and are not shown in these percentages.

In my opinion, both Houses (Congress and Senate) should strongly support, on a national level, the ULCC (Utility Location Co-ordination Council); this could very well help reduce this damage by the One Call Central System discussed by Senator Beall.

When the Tennessee State Legislature convenes in January 1976 I intend to push with much vigor for state support of ULCC in Tennessee.

While I do not agree with all of OPSO requirements in their present form, I agree with the majority and respect them in their entirety. My pros and cons pertaining to OPSO would be a very lengthy discussion and I would be pleased to testify before your committee any time you deem necessary.

Please find enclosed an article written by myself in 1964, it was purchased by *Gas Age Magazine* with exclusive rights for publication. 11 years have now passed and I find these same operating suggestions incorporated into OPSO minimum safety standards plus many more, but in my judgment these ten operating suggestions are most important to transmission and distribution of Natural Gas.

Please feel free at any time to contact me if I can be of assistance.

Respectfully,

ROBERT H. KING,
P. E. Tennessee Manager,

○