



U.S. Department
of Transportation
**Pipeline and Hazardous Materials
Safety Administration**

Administrator

1200 New Jersey Avenue, SE.
Washington, DC 20590

PHMSA-12-0002

The Honorable John D. Rockefeller, IV
Chairman
Committee on Commerce, Science, and Transportation
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) is submitting this report to Congress to fulfill the requirement of Section 8(a) of the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (Act). The Act requires the Secretary of Transportation to submit a report to Congress on leak detection systems utilized by operators of hazardous liquid pipeline facilities and transportation related flow lines. The Act requires the following be included in the report:

- an analysis of the technical limitations of current leak detection systems, including the ability of the systems to detect ruptures and small leaks that are ongoing or intermittent, and what can be done to foster development of better technologies; and,
- an analysis of the practicability of establishing technically, operationally, and economically feasible standards for the capability of such systems to detect leaks, and the safety benefits and adverse consequences of requiring operators to use leak detection systems.

PHMSA has been exploring issues involving leak detection for a number of years prior to the Act. On October 18, 2010, an Advanced Notice of Proposed Rulemaking (ANPRM) for the Safety of On-Shore Hazardous Liquid Pipelines was published. Among other issues discussed in the ANPRM was whether to establish and/or adopt standards and procedures for minimum leak detection requirements for all pipelines.

PHMSA took the following additional measures to conduct the analysis required by Section 8(a) of the Act:

- PHMSA and the National Association of Pipeline Safety Representatives sponsored a public workshop in March 2012 entitled "Improving Pipeline Leak Detection System Effectiveness."
- PHMSA coordinated a Government/Industry Pipeline Research and Development (R&D) Forum in July 2012 that included a working group discussion focused specifically on leak detection and mitigation.
- PHMSA issued a research announcement and solicitation for proposals for research and development on a number of topics, including leak detection.
- PHMSA commissioned an independent study on leak detection.

In addition to working towards satisfying the requirement of Section 8(a) of the Act, PHMSA is also addressing a leak detection related recommendation for natural gas transmission and distribution pipelines from the National Transportation Safety Board (NTSB). The above measures looked at aspects of leak detection systems used in gas transmission and distribution pipelines in addition to aspects of leak detection systems used in hazardous liquid pipelines. While the different types of pipeline systems have various and distinct characteristics and considerations for leak detection, PHMSA brought all pipeline industry stakeholders together in an attempt to more efficiently communicate the issues affecting the respective sectors and to share lessons learned.

It should also be noted the general approach was taken that leak detection systems are not just limited to the actual technology used and applied to pipeline facilities and infrastructure. Effective leak detection also relies heavily on how well any technology is implemented through people, procedures, and the environment in which it is installed and operated.

The independent study performed was based on input received through the workshops and a public comment period for the original scope of work. A public web-based seminar (webinar) and public comment period was also held for input on the draft report of the study. Additionally, some operators were interviewed as part of the work. The final report of the study, which is almost 300 pages, has been posted electronically for review at the following website: <http://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=80>. If you would like a hardcopy of the report, please contact Patricia Klinger, Deputy Director of Governmental, International, and Public Affairs, by phone at 202-366-4831 or by e-mail at patricia.klinger@dot.gov.

PHMSA will use all of the input gathered from the above initiatives when considering rulemaking in line with Section 8(b) of the Act. PHMSA anticipates progressing with a rulemaking related to leak detection in 2013.

An identical letter has been sent to the Ranking Member of the Senate Committee on Commerce, Science, and Transportation; the Chairman and Ranking Member of the House Committee on Transportation and Infrastructure; and the Chairman and Ranking Member of the House Committee on Energy and Commerce.

Regards,



Cynthia L. Quarterman



U.S. Department
of Transportation
**Pipeline and Hazardous Materials
Safety Administration**

Administrator

1200 New Jersey Avenue, SE.
Washington, DC 20590

DEC 27 2011

The Honorable John Thune
Ranking Member
Committee on Commerce, Science, and Transportation
United States Senate
Washington, DC 20510

Dear Senator Thune:

The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) is submitting this report to Congress to fulfill the requirement of Section 8(a) of the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (Act). The Act requires the Secretary of Transportation to submit a report to Congress on leak detection systems utilized by operators of hazardous liquid pipeline facilities and transportation related flow lines. The Act requires the following be included in the report:

- an analysis of the technical limitations of current leak detection systems, including the ability of the systems to detect ruptures and small leaks that are ongoing or intermittent, and what can be done to foster development of better technologies; and,
- an analysis of the practicability of establishing technically, operationally, and economically feasible standards for the capability of such systems to detect leaks, and the safety benefits and adverse consequences of requiring operators to use leak detection systems.

PHMSA has been exploring issues involving leak detection for a number of years prior to the Act. On October 18, 2010, an Advanced Notice of Proposed Rulemaking (ANPRM) for the Safety of On-Shore Hazardous Liquid Pipelines was published. Among other issues discussed in the ANPRM was whether to establish and/or adopt standards and procedures for minimum leak detection requirements for all pipelines.

PHMSA took the following additional measures to conduct the analysis required by Section 8(a) of the Act:

- PHMSA and the National Association of Pipeline Safety Representatives sponsored a public workshop in March 2012 entitled "Improving Pipeline Leak Detection System Effectiveness."
- PHMSA coordinated a Government/Industry Pipeline Research and Development (R&D) Forum in July 2012 that included a working group discussion focused specifically on leak detection and mitigation.
- PHMSA issued a research announcement and solicitation for proposals for research and development on a number of topics, including leak detection.
- PHMSA commissioned an independent study on leak detection.

In addition to working towards satisfying the requirement of Section 8(a) of the Act, PHMSA is also addressing a leak detection related recommendation for natural gas transmission and distribution pipelines from the National Transportation Safety Board (NTSB). The above measures looked at aspects of leak detection systems used in gas transmission and distribution pipelines in addition to aspects of leak detection systems used in hazardous liquid pipelines. While the different types of pipeline systems have various and distinct characteristics and considerations for leak detection, PHMSA brought all pipeline industry stakeholders together in an attempt to more efficiently communicate the issues affecting the respective sectors and to share lessons learned.

It should also be noted the general approach was taken that leak detection systems are not just limited to the actual technology used and applied to pipeline facilities and infrastructure. Effective leak detection also relies heavily on how well any technology is implemented through people, procedures, and the environment in which it is installed and operated.

The independent study performed was based on input received through the workshops and a public comment period for the original scope of work. A public web-based seminar (webinar) and public comment period was also held for input on the draft report of the study. Additionally, some operators were interviewed as part of the work. The final report of the study, which is almost 300 pages, has been posted electronically for review at the following website: <http://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=80>. If you would like a hardcopy of the report, please contact Patricia Klinger, Deputy Director of Governmental, International, and Public Affairs, by phone at 202-366-4831 or by e-mail at patricia.klinger@dot.gov.

PHMSA will use all of the input gathered from the above initiatives when considering rulemaking in line with Section 8(b) of the Act. PHMSA anticipates progressing with a rulemaking related to leak detection in 2013.

An identical letter has been sent to the Chairman of the Senate Committee on Commerce, Science, and Transportation; the Chairman and Ranking Member of the House Committee on Transportation and Infrastructure; and the Chairman and Ranking Member of the House Committee on Energy and Commerce.

Regards,



Cynthia L. Quarterman



U.S. Department
of Transportation
**Pipeline and Hazardous Materials
Safety Administration**

Administrator

1200 New Jersey Avenue, SE.
Washington, DC 20590

SEC 27

The Honorable Bill Shuster
Chairman
Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) is submitting this report to Congress to fulfill the requirement of Section 8(a) of the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (Act). The Act requires the Secretary of Transportation to submit a report to Congress on leak detection systems utilized by operators of hazardous liquid pipeline facilities and transportation related flow lines. The Act requires the following be included in the report:

- an analysis of the technical limitations of current leak detection systems, including the ability of the systems to detect ruptures and small leaks that are ongoing or intermittent, and what can be done to foster development of better technologies; and,
- an analysis of the practicability of establishing technically, operationally, and economically feasible standards for the capability of such systems to detect leaks, and the safety benefits and adverse consequences of requiring operators to use leak detection systems.

PHMSA has been exploring issues involving leak detection for a number of years prior to the Act. On October 18, 2010, an Advanced Notice of Proposed Rulemaking (ANPRM) for the Safety of On-Shore Hazardous Liquid Pipelines was published. Among other issues discussed in the ANPRM was whether to establish and/or adopt standards and procedures for minimum leak detection requirements for all pipelines.

PHMSA took the following additional measures to conduct the analysis required by Section 8(a) of the Act:

- PHMSA and the National Association of Pipeline Safety Representatives sponsored a public workshop in March 2012 entitled "Improving Pipeline Leak Detection System Effectiveness."
- PHMSA coordinated a Government/Industry Pipeline Research and Development (R&D) Forum in July 2012 that included a working group discussion focused specifically on leak detection and mitigation.
- PHMSA issued a research announcement and solicitation for proposals for research and development on a number of topics, including leak detection.
- PHMSA commissioned an independent study on leak detection.

In addition to working towards satisfying the requirement of Section 8(a) of the Act, PHMSA is also addressing a leak detection related recommendation for natural gas transmission and distribution pipelines from the National Transportation Safety Board (NTSB). The above measures looked at aspects of leak detection systems used in gas transmission and distribution pipelines in addition to aspects of leak detection systems used in hazardous liquid pipelines. While the different types of pipeline systems have various and distinct characteristics and considerations for leak detection, PHMSA brought all pipeline industry stakeholders together in an attempt to more efficiently communicate the issues affecting the respective sectors and to share lessons learned.

It should also be noted the general approach was taken that leak detection systems are not just limited to the actual technology used and applied to pipeline facilities and infrastructure. Effective leak detection also relies heavily on how well any technology is implemented through people, procedures, and the environment in which it is installed and operated.

The independent study performed was based on input received through the workshops and a public comment period for the original scope of work. A public web-based seminar (webinar) and public comment period was also held for input on the draft report of the study. Additionally, some operators were interviewed as part of the work. The final report of the study, which is almost 300 pages, has been posted electronically for review at the following website: <http://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=80>. If you would like a hardcopy of the report, please contact Patricia Klinger, Deputy Director of Governmental, International, and Public Affairs, by phone at 202-366-4831 or by e-mail at patricia.klinger@dot.gov.

PHMSA will use all of the input gathered from the above initiatives when considering rulemaking in line with Section 8(b) of the Act. PHMSA anticipates progressing with a rulemaking related to leak detection in 2013.

An identical letter has been sent to the Chairman and Ranking Member of the Senate Committee on Commerce, Science, and Transportation; the Ranking Member of the House Committee on Transportation and Infrastructure; and the Chairman and Ranking Member of the House Committee on Energy and Commerce.

Regards,



Cynthia L. Quarterman



U.S. Department
of Transportation
**Pipeline and Hazardous Materials
Safety Administration**

Administrator

1200 New Jersey Avenue, SE.
Washington, DC 20590

DEC 27 2011

The Honorable Nick Joe Rahall, II
Ranking Member
Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

Dear Congressman Rahall:

The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) is submitting this report to Congress to fulfill the requirement of Section 8(a) of the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (Act). The Act requires the Secretary of Transportation to submit a report to Congress on leak detection systems utilized by operators of hazardous liquid pipeline facilities and transportation related flow lines. The Act requires the following be included in the report:

- an analysis of the technical limitations of current leak detection systems, including the ability of the systems to detect ruptures and small leaks that are ongoing or intermittent, and what can be done to foster development of better technologies; and,
- an analysis of the practicability of establishing technically, operationally, and economically feasible standards for the capability of such systems to detect leaks, and the safety benefits and adverse consequences of requiring operators to use leak detection systems.

PHMSA has been exploring issues involving leak detection for a number of years prior to the Act. On October 18, 2010, an Advanced Noticed of Proposed Rulemaking (ANPRM) for the Safety of On-Shore Hazardous Liquid Pipelines was published. Among other issues discussed in the ANPRM was whether to establish and/or adopt standards and procedures for minimum leak detection requirements for all pipelines.

PHMSA took the following additional measures to conduct the analysis required by Section 8(a) of the Act:

- PHMSA and the National Association of Pipeline Safety Representatives sponsored a public workshop in March 2012 entitled "Improving Pipeline Leak Detection System Effectiveness."
- PHMSA coordinated a Government/Industry Pipeline Research and Development (R&D) Forum in July 2012 that included a working group discussion focused specifically on leak detection and mitigation.
- PHMSA issued a research announcement and solicitation for proposals for research and development on a number of topics, including leak detection.
- PHMSA commissioned an independent study on leak detection.

In addition to working towards satisfying the requirement of Section 8(a) of the Act, PHMSA is also addressing a leak detection related recommendation for natural gas transmission and distribution pipelines from the National Transportation Safety Board (NTSB). The above measures looked at aspects of leak detection systems used in gas transmission and distribution pipelines in addition to aspects of leak detection systems used in hazardous liquid pipelines. While the different types of pipeline systems have various and distinct characteristics and considerations for leak detection, PHMSA brought all pipeline industry stakeholders together in an attempt to more efficiently communicate the issues affecting the respective sectors and to share lessons learned.

It should also be noted the general approach was taken that leak detection systems are not just limited to the actual technology used and applied to pipeline facilities and infrastructure. Effective leak detection also relies heavily on how well any technology is implemented through people, procedures, and the environment in which it is installed and operated.

The independent study performed was based on input received through the workshops and a public comment period for the original scope of work. A public web-based seminar (webinar) and public comment period was also held for input on the draft report of the study. Additionally, some operators were interviewed as part of the work. The final report of the study, which is almost 300 pages, has been posted electronically for review at the following website: <http://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=80>. If you would like a hardcopy of the report, please contact Patricia Klinger, Deputy Director of Governmental, International, and Public Affairs, by phone at 202-366-4831 or by e-mail at patricia.klinger@dot.gov.

PHMSA will use all of the input gathered from the above initiatives when considering rulemaking in line with Section 8(b) of the Act. PHMSA anticipates progressing with a rulemaking related to leak detection in 2013.

An identical letter has been sent to the Chairman and Ranking Member of the Senate Committee on Commerce, Science, and Transportation; the Chairman of the House Committee on Transportation and Infrastructure; and the Chairman and Ranking Member of the House Committee on Energy and Commerce.

Regards,



Cynthia L. Quarterman



U.S. Department
of Transportation
**Pipeline and Hazardous Materials
Safety Administration**

Administrator

1200 New Jersey Avenue, SE.
Washington, DC 20590

2012 12 17

The Honorable Fred Upton
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) is submitting this report to Congress to fulfill the requirement of Section 8(a) of the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (Act). The Act requires the Secretary of Transportation to submit a report to Congress on leak detection systems utilized by operators of hazardous liquid pipeline facilities and transportation related flow lines. The Act requires the following be included in the report:

- an analysis of the technical limitations of current leak detection systems, including the ability of the systems to detect ruptures and small leaks that are ongoing or intermittent, and what can be done to foster development of better technologies; and,
- an analysis of the practicability of establishing technically, operationally, and economically feasible standards for the capability of such systems to detect leaks, and the safety benefits and adverse consequences of requiring operators to use leak detection systems.

PHMSA has been exploring issues involving leak detection for a number of years prior to the Act. On October 18, 2010, an Advanced Notice of Proposed Rulemaking (ANPRM) for the Safety of On-Shore Hazardous Liquid Pipelines was published. Among other issues discussed in the ANPRM was whether to establish and/or adopt standards and procedures for minimum leak detection requirements for all pipelines.

PHMSA took the following additional measures to conduct the analysis required by Section 8(a) of the Act:

- PHMSA and the National Association of Pipeline Safety Representatives sponsored a public workshop in March 2012 entitled "Improving Pipeline Leak Detection System Effectiveness."
- PHMSA coordinated a Government/Industry Pipeline Research and Development (R&D) Forum in July 2012 that included a working group discussion focused specifically on leak detection and mitigation.
- PHMSA issued a research announcement and solicitation for proposals for research and development on a number of topics, including leak detection.
- PHMSA commissioned an independent study on leak detection.

In addition to working towards satisfying the requirement of Section 8(a) of the Act, PHMSA is also addressing a leak detection related recommendation for natural gas transmission and distribution pipelines from the National Transportation Safety Board (NTSB). The above measures looked at aspects of leak detection systems used in gas transmission and distribution pipelines in addition to aspects of leak detection systems used in hazardous liquid pipelines. While the different types of pipeline systems have various and distinct characteristics and considerations for leak detection, PHMSA brought all pipeline industry stakeholders together in an attempt to more efficiently communicate the issues affecting the respective sectors and to share lessons learned.

It should also be noted the general approach was taken that leak detection systems are not just limited to the actual technology used and applied to pipeline facilities and infrastructure. Effective leak detection also relies heavily on how well any technology is implemented through people, procedures, and the environment in which it is installed and operated.

The independent study performed was based on input received through the workshops and a public comment period for the original scope of work. A public web-based seminar (webinar) and public comment period was also held for input on the draft report of the study. Additionally, some operators were interviewed as part of the work. The final report of the study, which is almost 300 pages, has been posted electronically for review at the following website: <http://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=80>. If you would like a hardcopy of the report, please contact Patricia Klinger, Deputy Director of Governmental, International, and Public Affairs, by phone at 202-366-4831 or by e-mail at patricia.klinger@dot.gov.

PHMSA will use all of the input gathered from the above initiatives when considering rulemaking in line with Section 8(b) of the Act. PHMSA anticipates progressing with a rulemaking related to leak detection in 2013.

An identical letter has been sent to the Chairman and Ranking Member of the Senate Committee on Commerce, Science, and Transportation; the Chairman and Ranking Member of the House Committee on Transportation and Infrastructure; and the Ranking Member of the House Committee on Energy and Commerce.

Regards,



Cynthia L. Quarterman



U.S. Department
of Transportation
**Pipeline and Hazardous Materials
Safety Administration**

Administrator

1200 New Jersey Avenue, SE.
Washington, DC 20590

The Honorable Henry Waxman
Ranking Member
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

Dear Congressman Waxman:

The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) is submitting this report to Congress to fulfill the requirement of Section 8(a) of the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (Act). The Act requires the Secretary of Transportation to submit a report to Congress on leak detection systems utilized by operators of hazardous liquid pipeline facilities and transportation related flow lines. The Act requires the following be included in the report:

- an analysis of the technical limitations of current leak detection systems, including the ability of the systems to detect ruptures and small leaks that are ongoing or intermittent, and what can be done to foster development of better technologies; and,
- an analysis of the practicability of establishing technically, operationally, and economically feasible standards for the capability of such systems to detect leaks, and the safety benefits and adverse consequences of requiring operators to use leak detection systems.

PHMSA has been exploring issues involving leak detection for a number of years prior to the Act. On October 18, 2010, an Advanced Notice of Proposed Rulemaking (ANPRM) for the Safety of On-Shore Hazardous Liquid Pipelines was published. Among other issues discussed in the ANPRM was whether to establish and/or adopt standards and procedures for minimum leak detection requirements for all pipelines.

PHMSA took the following additional measures to conduct the analysis required by Section 8(a) of the Act:

- PHMSA and the National Association of Pipeline Safety Representatives sponsored a public workshop in March 2012 entitled "Improving Pipeline Leak Detection System Effectiveness."
- PHMSA coordinated a Government/Industry Pipeline Research and Development (R&D) Forum in July 2012 that included a working group discussion focused specifically on leak detection and mitigation.
- PHMSA issued a research announcement and solicitation for proposals for research and development on a number of topics, including leak detection.
- PHMSA commissioned an independent study on leak detection.

In addition to working towards satisfying the requirement of Section 8(a) of the Act, PHMSA is also addressing a leak detection related recommendation for natural gas transmission and distribution pipelines from the National Transportation Safety Board (NTSB). The above measures looked at aspects of leak detection systems used in gas transmission and distribution pipelines in addition to aspects of leak detection systems used in hazardous liquid pipelines. While the different types of pipeline systems have various and distinct characteristics and considerations for leak detection, PHMSA brought all pipeline industry stakeholders together in an attempt to more efficiently communicate the issues affecting the respective sectors and to share lessons learned.

It should also be noted the general approach was taken that leak detection systems are not just limited to the actual technology used and applied to pipeline facilities and infrastructure. Effective leak detection also relies heavily on how well any technology is implemented through people, procedures, and the environment in which it is installed and operated.

The independent study performed was based on input received through the workshops and a public comment period for the original scope of work. A public web-based seminar (webinar) and public comment period was also held for input on the draft report of the study. Additionally, some operators were interviewed as part of the work. The final report of the study, which is almost 300 pages, has been posted electronically for review at the following website: <http://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=80>. If you would like a hardcopy of the report, please contact Patricia Klinger, Deputy Director of Governmental, International, and Public Affairs, by phone at 202-366-4831 or by e-mail at patricia.klinger@dot.gov.

PHMSA will use all of the input gathered from the above initiatives when considering rulemaking in line with Section 8(b) of the Act. PHMSA anticipates progressing with a rulemaking related to leak detection in 2013.

An identical letter has been sent to the Chairman and Ranking Member of the Senate Committee on Commerce, Science, and Transportation; the Chairman and Ranking Member of the House Committee on Transportation and Infrastructure; and the Chairman of the House Committee on Energy and Commerce.

Regards,



Cynthia L. Quarterman