



THE SECRETARY OF TRANSPORTATION  
WASHINGTON, D.C. 20590

June 20, 2014

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

Dear Mr. Chairman:

I am pleased to submit our annual report concerning open National Transportation Safety Board (NTSB) and DOT Office of Inspector General (OIG) safety recommendations required by Section 6(b)(2) of the Norman Y. Mineta Research and Special Programs Improvement Act (Pub. L. No. 108-426), which addresses pipeline and hazardous materials safety. The enclosed report, "National Transportation Safety Board (NTSB) and DOT Office of the Inspector General (OIG): Open Safety Recommendations," fulfills that requirement.

Section 19(c) of the Pipeline Safety Improvement Act of 2002 (Pub.L.107-355) also requires the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) to report to Congress each year on any pipeline safety recommendations made by the National Transportation Safety Board (NTSB) during the prior year and to provide a copy of the response for each recommendation. This letter is also submitted in fulfillment of this requirement.

With safety as our highest priority, the Department has aggressively sought closure of open NTSB and OIG pipeline and hazardous materials safety recommendations referred to in section 6(a)(2). As of this report, six of these NTSB recommendations and no OIG recommendations remain open. As of December 1, 2013, the NTSB issued no new safety recommendations to PHMSA during calendar year 2013. PHMSA will be happy to provide an interim update, upon request, on any actions taken regarding PHMSA's open recommendations after this reporting period ended. The Department will continue to work diligently with NTSB to close the open recommendations by exercising a variety of regulatory and non-regulatory approaches, within the timelines allowed by technical assessment, notice and comment rulemaking, public comment, and due diligence.

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The Honorable John D. Rockefeller IV

I have sent a similar letter to the Ranking Member of the Senate Committee on Commerce, Science, and Transportation and the Chairmen and Ranking Members of the House Committees on Transportation and Infrastructure, and Energy and Commerce.

Sincerely,

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Anthony R. Foxx

Enclosure



THE SECRETARY OF TRANSPORTATION  
WASHINGTON, D.C. 20590

June 20, 2014

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

Dear Senator Thune:

I am pleased to submit our annual report concerning open National Transportation Safety Board (NTSB) and DOT Office of Inspector General (OIG) safety recommendations required by Section 6(b)(2) of the Norman Y. Mineta Research and Special Programs Improvement Act (Pub. L. No. 108-426), which addresses pipeline and hazardous materials safety. The enclosed report, "National Transportation Safety Board (NTSB) and DOT Office of the Inspector General (OIG): Open Safety Recommendations," fulfills that requirement.

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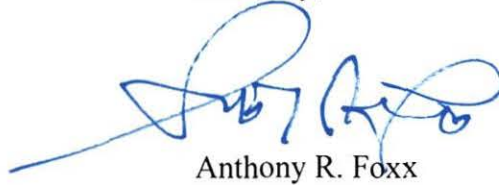
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THE SECRETARY OF TRANSPORTATION  
WASHINGTON, D.C. 20590

June 20, 2014

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

Dear Mr. Chairman:

I am pleased to submit our annual report concerning open National Transportation Safety Board (NTSB) and DOT Office of Inspector General (OIG) safety recommendations required by Section 6(b)(2) of the Norman Y. Mineta Research and Special Programs Improvement Act (Pub. L. No. 108-426), which addresses pipeline and hazardous materials safety. The enclosed report, "National Transportation Safety Board (NTSB) and DOT Office of the Inspector General (OIG): Open Safety Recommendations," fulfills that requirement.

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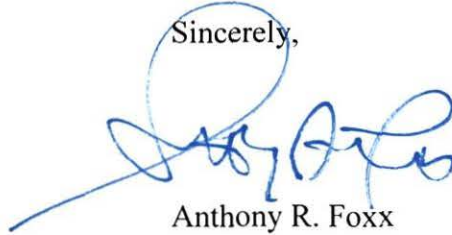
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Anthony R. Foxx

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THE SECRETARY OF TRANSPORTATION  
WASHINGTON, D.C. 20590

June 20, 2014

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

Dear Congressman Rahall:

I am pleased to submit our annual report concerning open National Transportation Safety Board (NTSB) and DOT Office of Inspector General (OIG) safety recommendations required by Section 6(b)(2) of the Norman Y. Mineta Research and Special Programs Improvement Act (Pub. L. No. 108-426), which addresses pipeline and hazardous materials safety. The enclosed report, "National Transportation Safety Board (NTSB) and DOT Office of the Inspector General (OIG): Open Safety Recommendations," fulfills that requirement.

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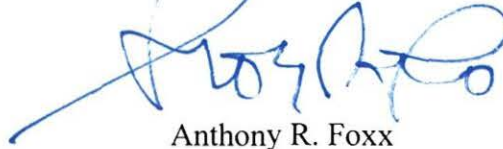
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THE SECRETARY OF TRANSPORTATION  
WASHINGTON, D.C. 20590

June 20, 2014

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

Dear Mr. Chairman:

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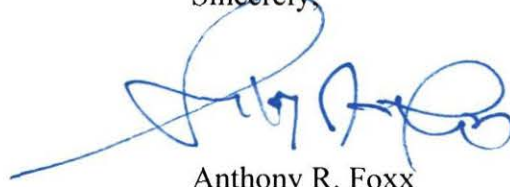
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THE SECRETARY OF TRANSPORTATION  
WASHINGTON, D.C. 20590

June 20, 2014

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

Dear Congressman Waxman:

I am pleased to submit our annual report concerning open National Transportation Safety Board (NTSB) and DOT Office of Inspector General (OIG) safety recommendations required by Section 6(b)(2) of the Norman Y. Mineta Research and Special Programs Improvement Act (Pub. L. No. 108-426), which addresses pipeline and hazardous materials safety. The enclosed report, "National Transportation Safety Board (NTSB) and DOT Office of the Inspector General (OIG): Open Safety Recommendations," fulfills that requirement.

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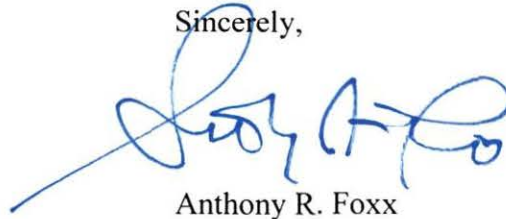
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Anthony R. Foxx

Enclosure

**National Transportation Safety Board (NTSB)  
and  
DOT Office of Inspector General (OIG):**

**Open Safety Recommendations Referred to in Section 6(a)(2) of the Norman Y. Mineta  
Research and Special Programs Improvement Act**

**A Report to Congress Required by Pub. L. No. 108-426**

**U.S. Department of Transportation  
January 2014**

National Transportation Safety Board (NTSB) and  
DOT Office of Inspector General (OIG):  
Open section 6(a)(2) Safety Recommendations on Pipeline and Hazardous Materials Safety

January 2014

**Executive Summary**

The Norman Y. Mineta Research and Special Programs Improvement Act (Mineta Act) (Pub. L. No. 108-426) directs the Secretary of Transportation to submit a report on open National Transportation Safety Board (NTSB) and U.S. Department of Transportation (DOT) Office of Inspector General (OIG) recommendations referred to in section 6(a)(2) concerning pipeline and hazardous materials safety. Specifically, the Mineta Act states:

Section 6(b)(2) NTSB AND INSPECTOR GENERAL RECOMMENDATIONS –  
Not later than January 1st of each year, the Secretary shall transmit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report containing each recommendation referred to in subsection (a)(2) and a copy of the Department of Transportation response to each such recommendation.

The Department has aggressively sought closure of open NTSB and OIG recommendations. As of December 31, 2013 there were six open NTSB and no open OIG pipeline and hazardous materials safety recommendations referred to in section 6(a)(2) (see Appendix A for the status of NTSB recommendations). Copies of DOT responses sent to NTSB in Calendar Year 2013 on these open recommendations are included as required in the Mineta Act (see Appendix B).

DOT will continue to work diligently with NTSB to close the open recommendations within the timelines allowed by technical assessment, rulemaking, public comment, due diligence, and other required administrative process.

## **Report Structure**

This report consists of an executive summary and two appendices:

- Appendix A: Status of Open NTSB Recommendations Referred to in section 6(a)(2) for Pipeline and Hazardous Materials Safety—This section summarizes the status of open NTSB recommendations referred to in section 6(a)(2) assigned to DOT.
- Appendix B: Recent Responses to NTSB Recommendations Referred to in section 6(a)(2)—This section appends the most recent correspondence to NTSB on the status of open recommendations referred to in section 6(a)(2).

## **Report Contact**

Questions about the contents of this report may be directed to:

Pipeline and Hazardous Materials Safety Administration  
Office of Governmental, International and Public Affairs  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE, E27-330  
Washington, DC 20590  
(202) 366-4831  
(202) 366-7431 (fax)

**Appendix A: Status of Open NTSB Recommendations Referred to in Section 6(a)(2)  
as of December 31, 2012**

<b>NTSB- assigned ID</b>	<b>NTSB- assigned status</b>	<b>Recommendation</b>	<b>Status</b>
H-98-27	Open – unacceptable response	Prohibit the carrying of hazardous materials in external piping of cargo tanks, such as loading lines, that may	Rulemaking tabled until completion of a GAO report to Congress on the safety of



		be vulnerable to failure in an accident.	transporting flammable liquids in the wetlines on a cargo tank motor vehicle required by MAP-21, which also prohibits the Pipeline and Hazardous Materials Safety Administration (PHMSA) from finalizing a rule until completion of the report or 2 years from the date of enactment of MAP-21, whichever is earlier. GAO issued a final report September 11, 2013. PHMSA is reviewing report for consideration of future action.
H-92-01	Open – acceptable response	Provide cargo tank manufacturers specific written guidance about (a) the factors and assumptions that must be considered when calculating the loads on cargo tank rollover protection devices in determining compliance with existing DOT performance standards, and (b) acceptable means to shield and protect the top-mounted closure fittings on all bulk liquid cargo tanks.	PHMSA is in telephonic communication with NTSB concerning the best approach to close this recommendation.
H-04-23	Open – acceptable response	Require periodic nondestructive testing to be conducted on nurse tanks to identify material flaws that could develop and grow during a tank’s service and result in a tank failure.	PHMSA has established a joint effort with the Federal Motor Carrier Safety Administration that will examine various aspects of nondestructive testing on nurse tanks. A contract with Virginia Tech, which is partnering with Iowa University, to research nurse tank safety was awarded and PHMSA and FMCSA were briefed on the final report on August 13, 2013. Currently working to determine next steps.
P-01-02	Open – acceptable response	Require that excess flow valves be installed in all new and renewed gas service lines, regardless of a	The Distribution Integrity Management Final Rule was published on December 4,

		customer's classification, when operating conditions are compatible with readily available valves.	2009. The ANPRM on expanded use of Excess Flow Valves was published on November 25, 2011. The NPRM is completed and under review.
P-04-01	Open – acceptable response	Remove the exemption in 49 CFR 192.65(b) that permits pipe to be placed in natural gas service after pressure testing when the pipe cannot be verified to have been transported in accordance with the American Petroleum Institute's recommended practice RP 5L.1.	In August 2009, PHMSA sent a report to NTSB indicating the unlikely presence of pre-11/12/1970 line pipe in operators' inventory. The Final Rule is completed and under review.
P-04-03	Open – acceptable response	Evaluate the need for a truck transportation standard to prevent damage to pipe, and, if needed, develop the standard and incorporate it in 49 CFR Parts 192 and 195 for both natural gas and hazardous liquid line pipe.	A Recommended Practice (API RP 5LT) has been published by the American Petroleum Institute. NPRM with changes to Parts 192 and 195, which incorporate API RP 5LT was published in August 2013; comment period closed October 2013.



Administrator

1200 New Jersey Avenue, SE  
Washington, DC 20590

**Pipeline and Hazardous  
Materials Safety  
Administration**

August 29, 2013

The Honorable Deborah A.P. Hersman  
Acting Chairman  
National Transportation Safety Board  
490 L'Enfant Plaza East, SW  
Washington, DC 20594

Dear Acting Chairman Hersman:

I am writing to update you on the status of actions taken to date to address the 25 open NTSB recommendations and propose closure of four of the recommendations. Recommendations proposed for closure are: P-04-1, P-11-8, P-11-9, and P-11-16. This letter also provides a more recent update of the actions taken to address the 2012 NTSB recommendations submitted in PHMSA's June 26, 2013, report to Congress.

We take our responsibility to address all recommendations seriously and will continue to work aggressively to close all open recommendations.

**PHMSA's ACTIONS TO ADDRESS THE 25 OPEN NTSB RECOMMENDATIONS**

**Safety Recommendation P-01-2**

**Recommendation:** *Require that excess flow valves be installed in all new and renewed gas service lines, regardless of a customer's classification, when the operating conditions are compatible with readily available valves.*

**Response:** On December 4, 2009, PHMSA published its final rule titled "Pipeline Safety: Integrity Management Program for Gas Distribution Pipelines" (DIMP). The DIMP rule addressed a significant portion of new and renewed gas service lines by requiring operators to install excess flow valves (EFV) on all new and replaced residential service lines serving single residences, as required by the PIPES Act of 2006.

To capture pipelines not already covered under the DIMP rule, PHMSA drafted a Notice of Proposed Rulemaking (NPRM) titled "Pipeline Safety: Expanding the Use of Excess Flow Valves in Gas Distribution Systems to Applications Other Than Single-Family Residences." The NPRM is tentatively scheduled for publication in December 2013. It proposes to expand Part 192 of the Hazardous Materials Regulations to include new or replaced distribution

service lines serving branched single-family residences, multi-family residences, and small commercial entities consuming gas volumes not exceeding 1,000 Standard Cubic Feet per Hour (SCFH). The NPRM also proposes to require the use of curb valves (manual service-line shutoff valves) for those service lines with meter capacities exceeding 1,000 SCFH.

#### **Safety Recommendation P-04-1**

**Recommendation:** *Remove the exemption in regulations that permits pipe to be placed in natural gas service after pressure testing when the pipe cannot be verified to have been transported in accordance with the American Petroleum Institute's (API) recommended practice RP5L1.*

**Response:** PHMSA proposes to close this recommendation. PHMSA is currently addressing this recommendation through a rulemaking titled "Pipeline Safety: Miscellaneous Changes to Pipeline Safety Regulations." The rule will eliminate the exemption contained within 192.65. The NPRM comment period closed in February 2012, and PHMSA's Pipeline Advisory Committee granted approval of the proposed change in July 2012. The final rule is expected to be published by November 2013.

#### **Safety Recommendation P-04-3**

**Recommendation:** *Evaluate the need for a truck transportation standard to prevent damage to pipe and, if needed, develop the standard and incorporate it into regulations for both natural gas and hazardous liquid line pipe.*

**Response:** PHMSA is addressing this NTSB recommendation through a NPRM titled "Pipeline Safety: Periodic Updates of Regulatory References to Technical Standards and Miscellaneous Amendments." Through this NPRM, PHMSA proposes to adopt API Recommended Practice 5LT, "Recommended Practice for Truck Transportation of Line Pipe" (First edition, March 1, 2012). The rulemaking is tentatively expected to be published in November 2013.

#### **Safety Recommendation P-09-1**

**Recommendation:** *Conduct a comprehensive study to identify actions that can be implemented by pipeline operators to eliminate catastrophic longitudinal seam failures in electric resistance welded (ERW) pipe; at a minimum, the study should include assessments of the effectiveness and effects of in-line inspection tools, hydrostatic pressure tests, and spike pressure tests; pipe material strength characteristics and failure mechanisms; the effects of aging on ERW pipelines; operational factors; and data collection and predictive analysis.*

**Response:** In 2011, PHMSA launched a two-phase, comprehensive study to understand longitudinal ERW seam failures. The objectives of the study, which is being performed by the Battelle Memorial Institute, are to integrate data from industry and PHMSA to quantify vintage seam failure statistics with a focus on low-frequency ERW seams; to understand longitudinal ERW seam failures, and on that basis, quantify the effectiveness of inspection and hydrotesting

to manage integrity and ensure safety in order to avoid and eliminate catastrophic failures. Phase 1 of the study is scheduled to be completed on August 31, 2013. Phase 2 work began in December 2012 and is scheduled to be completed by the third quarter of 2014. The results-to-date are available at: <https://primis.phmsa.dot.gov/matrix/PrjHome.rdm?prj=390>.

### **Safety Recommendation P-09-2**

**Recommendation:** *Based on the results of the study from NTSB Open Recommendation P-09-1, implement the actions needed.*

**Response:** PHMSA will address this recommendation once the ERW study regarding P-09-1 is complete. PHMSA anticipates it will take an additional 12 to 18 months after the ERW study is complete to implement the necessary actions.

### **Safety Recommendation P-11-8**

**Recommendation:** *Require operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines to provide system-specific information about their pipeline systems to the emergency response agencies of the communities and jurisdictions in which those pipelines are located. This information should include pipe diameter, operating pressure, product transported, and potential impact radius.*

**Response:** PHMSA proposes to close this recommendation. On November 3, 2010, PHMSA published Advisory Bulletin "ADB-10-08: Pipeline Safety: Emergency Preparedness Communications," which advised operators of gas and hazardous liquid pipeline facilities that they must make their pipeline emergency response plans available to local emergency response officials. PHMSA recommended that operators provide their emergency response plans to officials through their required liaison and public awareness activities.

Additional actions include:

- Conducted a Public Awareness Workshop on June 19-20, 2013 that brought together pipeline safety public awareness stakeholders to discuss general findings from recent Federal and State public awareness inspections; gain perspective on public awareness challenges and successes; and identify ways to strengthen pipeline safety public awareness, including pipeline safety preparedness and response for local emergency response and public safety agencies.
- Completing Federal inspections of pipeline operators' public awareness plans. PHMSA is analyzing the results of these inspections. Pipeline operator public awareness plans are required by 49 CFR 192.616 and 49 CFR 195.440. Operators must develop and implement public awareness programs that follow the guidance provided by the American Petroleum Institute (API) Recommended Practice (RP) 1162, "Public Awareness Programs for Pipeline Operators" (incorporated by reference in Federal regulations).

- Provided funding for a research project through the Hazardous Materials Cooperative Research Program to develop a guide for effective communication between pipeline operators and emergency responders. The guide will be available in August 2013.
- Established a Pipeline Emergency Response Working Group of emergency responders, pipeline operators, and regulators to serve as a forum for discussing strategies for institutionalizing pipeline safety knowledge in the emergency response community. The working group meets regularly to discuss goals and methods of implementation.
- Supported the formation of a working group of pipeline operators, emergency responders, and regulators in Georgia to create a statewide strategy. The strategy establishes and sustains effective two-way communication between emergency responders and the pipeline industry, develops a comprehensive training program for emergency responders to better understand the risks associated with pipeline facilities and to know how to properly respond to a pipeline incident, and develops a model that will work for Georgia and be transferrable to other States.
- Published a request for the renewal of an information collection that would require each operator of a pipeline facility (except for distribution lines and gathering lines) to provide PHMSA with contact information and geospatial data on their pipeline system. The data will be incorporated into the National Pipeline Mapping System (NPMS) to support various regulatory programs, pipeline inspections, and authorized external customers. The update informs the NPMS of any changes to the data over the previous year and allows PHMSA to maintain and improve the accuracy of the information.

Further, PHMSA plans is to convene a Public Awareness (PA) Working Group that will leverage the results of the efforts described above and issue findings on gaps in the requirements for pipeline operators to communicate with local emergency response agencies. The findings of the PA Working Group will be made available to the public in the first quarter of calendar year 2014. PHMSA will also make the findings available to the API as input on public awareness for revision to API Recommended Practice 1162. PHMSA will review the PA Working Group's findings to determine if additional changes need to be made to Federal regulations regarding communications and information sharing between pipeline operators and local emergency response agencies.

### **Safety Recommendation P-11-9**

**Recommendation:** *Require operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines to ensure that their control room operators immediately and directly notify the 911 emergency call center(s) for the communities and jurisdictions in which those pipelines are located when a possible rupture of any pipeline is indicated."*

**Response:** PHMSA recommends closing this recommendation as acceptable. On October 11, 2012, PHMSA published Advisory Bulletin "ADB-12-09: Communication During Emergency Situations" (77 FR 61826) in the Federal Register. Furthermore, National Emergency Number Association (NENA) has developed a Standard 56-507, "Pipeline Emergency Operations," which is available at <http://www.nena.org/?page=PipelineEmergStnd> and "is intended to aid Public Safety Answering Points (PSAP) in the development and implementation of emergency

communications protocols pertaining to pipeline emergencies. It addresses common situations involving pipelines carrying non-toxic natural gas and hazardous liquid petroleum products.”

On December 6, 2012, NENA launched the PSAP Information for Pipeline Emergencies (PIPE) Database. According to a NENA press release at <http://www.nena.org/news/110798/>, the PIPE Database was developed specifically for pipeline operators. The NENA PIPE Database provides direct-inbound, ten-digit numbers to be used for specific 9-1-1 centers. The database is being offered on an annual subscription that includes the initial set-up and three free updates per year to ensure that companies have the most up-to-date and dependable information. Subscription rates vary according to the number of jurisdictions being served.

### **Safety Recommendation P-11-10**

**Recommendation:** *Require that all operators of natural gas transmission and distribution pipelines equip their supervisory control and data acquisition systems with tools to assist in recognizing and pinpointing the location of leaks, including line breaks; such tools could include a real-time leak detection system and appropriately spaced flow and pressure transmitters along covered transmission lines.*

**Response:** In October 2012, PHMSA published a leak detection study assessing leak detection system effectiveness for gas transmission and distribution lines as well as hazardous liquids facilities and related flow lines on its website at: <http://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=80>.

In March 2012, PHMSA held a public workshop to discuss expanding the use of pipeline leak detection systems and enhancing the effectiveness of automatic and remote controlled valves on the Nation’s natural gas and liquid pipelines.

Furthermore, a Regulatory Support Paper for rulemaking considerations for both liquid and gas lines that considers the results of the study has been developed and is under agency review. PHMSA continues to work with the regulated community to address this issue.

### **Safety Recommendation P-11-11**

**Recommendation:** *Amend Title 49 Code of Federal Regulations Section 192.935(c) to directly require that automatic shutoff valves (ASV) or remote control valves (RCV) in high consequence areas and in class 3 and 4 locations be installed and spaced at intervals that consider the population factors listed in the regulations.*

**Response:** PHMSA conducted a non-mandatory study on ASV and RCV installation and use and transmitted the results to Congress in January 2013. PHMSA has also drafted a Regulatory Support Paper for proposed rulemaking regarding the use of ASVs and RCVs. The Regulatory Support Paper is under agency review.

### **Safety Recommendation P-11-12**

**Recommendation:** *Amend 49 CFR 199.105 and 49 CFR 199.225 to eliminate operator discretion with regard to testing of covered employees. The revised language should require drug and alcohol testing of each employee whose performance either contributed to the accident or cannot be completely discounted as a contributing factor to the accident.*

**Response:** PHMSA is addressing this recommendation in a rulemaking titled “Pipeline Safety: Operator Qualification, Cost Recovery, and Other Proposed Changes.” Through this rulemaking, PHMSA is proposing to modify 199.105 and 199.225 by requiring drug testing of employees and allowing exemption from drug testing only when there is sufficient information that establishes the employee(s) had no role in the accident. PHMSA anticipates this NPRM will be published in November 2013.

#### **Safety Recommendation P-11-14**

**Recommendation:** *Amend Title 49 Code of Federal Regulations 192.619 to delete the grandfather clause and require that all gas transmission pipelines constructed before 1970 be subjected to a hydrostatic pressure test that incorporates a spike test.*

**Response:** PHMSA is developing an Integrity Verification Process (IVP) to assure that pipeline operators take the appropriate steps to ensure safe operation, address testing requirements to demonstrate seam stability, and confirm the material strength of untested gas transmission pipelines. On August 7, 2013, PHMSA conducted a public workshop to present its proposed IVP and seek comment. PHMSA expresses its thanks to the Honorable Christopher A. Hart, NTSB Vice-Chair, for presenting the findings of the San Bruno investigation and providing NTSB’s perspective on integrity verification during the workshop.

PHMSA will formalize the IVP in an upcoming rulemaking. PHMSA is also considering rulemaking to remove the “Grandfather Clause.”

#### **Safety Recommendation P-11-15**

**Recommendation:** *Amend Title 49 Code of Federal Regulations Part 192 of the Federal pipeline safety regulations so that manufacturing- and construction-related defects can only be considered stable if a gas pipeline has been subjected to a post-construction hydrostatic pressure test of at least 1.25 times the maximum allowable operating pressure.*

**Response:** On August 7, 2013, PHMSA held a workshop to present and allow public comment on its IVP proposal to address issues regarding testing requirements to demonstrate seam stability and to confirm the material strength of untested gas transmission pipelines operating under the Grandfather Clause. PHMSA will formalize the IVP in an upcoming rulemaking.

#### **Safety Recommendation P-11-16**

**Recommendation:** *Assist the California Public Utilities Commission in conducting the comprehensive audit recommended in Safety Recommendation P-11-22.*



**Response:** PHMSA proposes to close this recommendation. PHMSA assisted the California Public Utilities Commission (CA PUC) with conducting seven comprehensive audits of all aspects of PG&E's operations, including control room operations, emergency planning, record-keeping, performance-based risk and integrity management programs, and public awareness programs. The audits are as follows:

- Public Awareness Effectiveness - November 1-3, 2011;
- Operation, Maintenance, and Emergency Response Plans - February 13-17, 2012;
- Operator Qualification - July 30 - August 3, 2012;
- Transmission Integrity Management - August 27-31, 2012 and September 10-14, 2012;
- Control Room Management - October 22-26, 2012;
- Distribution Integrity Management Inspection - December 10-14, 2012; and
- Standard Inspection North Bay Operations - April 8-12, 2013.

#### **Safety Recommendation P-11-17**

**Recommendation:** *Require that all natural gas transmission pipelines be configured so as to accommodate in-line inspection tools, with priority given to older pipelines.*

**Response:** Forty percent of the Nation's natural gas transmission pipelines are currently unpiggable; therefore, requiring that all natural gas transmission pipelines be made piggable entails a major rulemaking to include an in-depth cost/benefit analysis. Many of these pipelines may need to be modified or the in-line inspection technology must be improved. PHMSA is evaluating recently submitted gas transmission annual report data to better understand the potential impact of such a requirement.

PHMSA is also researching pipe inspection technologies. Beginning in 2004 and with \$7.4M investment to date, PHMSA's Pipeline Safety Research Program partnered with other Federal agencies, academics, and the Northeast Gas Association to develop, demonstrate, and deploy two robotic inspection technologies for unpiggable natural gas pipelines. The first tool was commercialized in 2011 for 6-inch to 8-inch pipe diameters. The second tool for 20-inch to 26-inch diameters will be commercial before spring 2013 and easily capable of detecting before failure the types of corrosion defects found in the Columbia Gas Transmission Corporation pipeline at Sissonville, WV. These robotic solutions will greatly enhance the pipeline industry's ability to inspect unpiggable pipelines. Visual and magnetic flux leakage sensors for corrosion detection can now be passed through plug valves and many other line configurations that make pipelines unpiggable. PHMSA is now entertaining new research that will integrate other sensors that detect crack-like defects onto these robotic solutions, expanding their inspection capabilities much further.

#### **Safety Recommendation P-11-18**

**Recommendation:** *Revise your integrity management inspection protocol to (1) incorporate a review of meaningful metrics; (2) require auditors to verify that the operator has a procedure in place for ensuring the completeness and accuracy of underlying information; (3) require auditors to review all integrity management performance measures reported to the Pipeline and Hazardous Materials Safety Administration and compare the leak, failure, and incident measures to the operator's risk model; and (4) require setting performance goals for pipeline operators at each audit and follow up on those goals at subsequent audits.”*

**Response:** PHMSA has nearly completed a “two-pronged” approach to:

1. Enhance oversight of current requirements for performance evaluation and associated measures; and
2. Develop and improve guidance for operators to develop more meaningful metrics.

PHMSA stood up gas and liquid data and metrics teams comprised of representatives from Federal and State government, the pipeline industry, and the public. The purpose of these teams is to:

- Identify key performance indicators and supporting meaningful metrics;
- Identify leading and predictive indicators;
- Improve the data collected by OPS; and
- Improve the knowledge base of the pipeline industry.

In January 2013, PHMSA held a data workshop facilitating our collection and sharing of information regarding data quality improvement; current performance measures; improving performance measures; and the best methods for collecting, analyzing, and ensuring the transparency of the additional data needed to improve performance measures.

In December 2012, PHMSA issued an advisory bulletin (CITATION) reminding operators of gas transmission and hazardous liquid pipeline facilities of their responsibilities, under Federal integrity management regulations, to perform evaluations of their integrity management programs using meaningful performance metrics.

### **Safety Recommendation P-11-19**

**Recommendation:** *(1) Develop and implement standards for integrity management and other performance-based safety programs that require operators of all types of pipeline systems to regularly assess the effectiveness of their programs using clear and meaningful metrics, and to identify and then correct deficiencies; and (2) make those metrics available in a centralized database.*

**Response:** PHMSA currently maintains a centralized and publically available database of metrics on its website. Operators mandatorily submit many of these metrics to PHMSA.

Available metrics include, but are not limited to: number of Serious Incidents by year, causes of Serious Incidents, number of Significant Incidents by year, consequences of Significant Incidents, and number of incidents reported by year. PHMSA also posts the complete data sets.

To sharpen PHMSA's focus on key performance indicators, PHMSA established the gas and liquid data teams described in P-11-18. Further, as part of the API 1173 Standard Development team that is working on Pipeline Safety Management Systems, PHMSA, State partners, and industry members are identifying key performance indicators to help identify measures to support meaningful metrics.

### **Safety Recommendation P-11-20**

**Recommendation:** *Work with state public utility commissions to (1) implement oversight programs that employ meaningful metrics to assess the effectiveness of their oversight programs and make those metrics available in a centralized database, and (2) identify and then correct deficiencies in those programs.*

**Response:** The National Association of Pipeline Safety Representatives (NAPSR) and PHMSA met in February and April of 2013 to develop draft metrics and preliminary criteria for screening those metrics. PHMSA is coordinating the work of this team with the work of the teams overseeing P-11-18 and P-11-19. PHMSA is working to communicate the outcome of these efforts with pipeline operators.

### **Safety Recommendation P-12-3**

**Recommendation:** *Revise Title 49 Code of Federal Regulations 195.452 to clearly state (1) when an engineering assessment of crack defects, including environmentally assisted cracks, must be performed; (2) the acceptable methods for performing these engineering assessments, including the assessment of cracks coinciding with corrosion with a safety factor that considers the uncertainties associated with sizing of crack defects; (3) criteria for determining when a probable crack defect in a pipeline segment must be excavated and time limits for completing those excavations; (4) pressure restriction limits for crack defects that are not excavated by the required date; and (5) acceptable methods for determining crack growth for any cracks allowed to remain in the pipe, including growth caused by fatigue, corrosion fatigue, or stress corrosion cracking as applicable.*

**Response:** Currently, Part 195 Appendix C provides guidance to help pipeline operators implement liquid Integrity Management Program (IMP) requirements, including detection of pipeline stress corrosion cracking (SCC) and other crack-like features such as fatigue cracks, narrow axial corrosion, toe cracks, hook cracks, etc. Appendix C states that an operator must choose a minimum of two internal inspection tools, including one to detect cracks.

Periodic assessment of the condition of gas transmission pipelines is required by 49 CFR sections 192.921 and 192.937. Periodic assessment of hazardous liquid pipelines is required

by section 195.452. These sections allow use of the inspection techniques addressed in these standards. The regulations provide minimal requirements for the use of these techniques.

PHMSA believes that incorporating recently developed consensus standards will assure better consistency, accuracy, and quality of pipeline assessments that are conducted using these techniques. To this end, PHMSA is developing an NPRM titled "Pipeline Safety: Safety of On-Shore Hazardous Liquid Pipelines." The NPRM proposes to incorporate by reference consensus standards governing conduct of assessments of the physical condition of in-service pipelines using in-line inspection, internal corrosion direct assessment, and SCC direct assessment. The NPRM is expected to be published by the end of CY2013.

#### **Safety Recommendation P-12-4**

**Recommendation:** *Revise Title 49 Code of Federal Regulations 195.452(h)(2), the "discovery of condition," to require, in cases where a determination about pipeline threats has not been obtained within 180 days following the date of inspection, that pipeline operators notify the Pipeline and Hazardous Materials Safety Administration and provide an expected date when adequate information will become available.*

**Response:** PHMSA is developing a NPRM titled "Pipeline Safety: Safety of On-Shore Hazardous Liquid Pipelines." The NPRM proposes to amend the existing "discovery of condition" language in the pipeline safety regulations to require pipeline operators to provide PHMSA with an expected date when adequate information will become available in cases where a determination about pipeline threats has not been obtained within 180 days following the date of inspection. The NPRM is expected to be published by the end of CY2013.

#### **Safety Recommendation P-12-5**

**Recommendation:** *Conduct a comprehensive inspection of Enbridge Incorporated's integrity management program after it is revised in accordance with Safety Recommendation P-12-11.*

**Response:** PHMSA has issued a record setting \$3.7 million civil penalty against Enbridge for findings relating to Enbridge's existing integrity management program, which failed to prevent the significant oil spill at Marshall, Michigan. PHMSA also developed a comprehensive approach to reviewing Enbridge's actions.

Following another Enbridge pipeline failure on July 27, 2012, on Enbridge's Line 14 in Grand Marsh, Wisconsin, PHMSA issued a Corrective Action Order (CAO) covering far more than typical requirements normally contained in CAOs. The order required the development and implementation of a comprehensive plan to improve the safety record on Enbridge's entire Lakehead system. The Lakehead Plan addressed multiple integrity management elements, including improvements to risk modeling, pipeline integrity verification, in-line inspection, pipe replacement programs, valve placement, leak detection systems, and other safety improvements.

Det Norske Veritas (DNV), retained under our CAO as an independent third party verification agent, completed its review of the Lakehead Plan and submitted a final report to PHMSA on June 30, 2013. DNV considers the Plan adequate, and when it is implemented effectively, anticipates an improvement in safety performance. DNV will monitor the implementation of the Lakehead Plan to evaluate its effectiveness in improving safety performance and integrity management.

In addition to the PHMSA oversight described above, PHMSA has also conducted a review of Enbridge's compliance with the new regulations on Control Room Management and public awareness effectiveness. PHMSA will continue to closely monitor Enbridge's progress toward implementing the Lakehead plan, requirements contained in PHMSA enforcement actions, and regulatory requirements. PHMSA will also continue to review and improve its regulations.

### **Safety Recommendation P-12-6**

**Recommendation:** *Issue an advisory bulletin to all hazardous liquid and natural gas pipeline operators describing the circumstances of the accident in Marshall, Michigan, including the deficiencies observed in Enbridge Incorporated's integrity management program, and ask them to take appropriate action to eliminate similar deficiencies.*

**Response:** PHMSA is drafting an Advisory Bulletin to satisfy this recommendation.

### **Safety Recommendation P-12-7**

**Recommendation:** *Develop requirements for team training of control center staff involved in pipeline operations similar to those used in other transportation modes.*

**Response:** There has been good progress on Control Room Management (CRM) implementation, including CRM training. PHMSA discussed the specific initiatives referenced in the NTSB report regarding team training with other DOT modes, including the Federal Aviation Administration, Federal Railroad Administration, and the United States Coast Guard/DHS. Additionally, PHMSA was provided training content from Enbridge. Enbridge is implementing team training based on the recommendation.

As we reported in our June 26, 2013 report to Congress, PHMSA is an active participant on the DOT's Human Factors Coordinating Committee. PHMSA has disseminated information about other DOT Operating Administration (OA) team training efforts and requirements through the CRM website (<http://primis.phmsa.dot.gov/c1m/fm.htm>) and has engaged other OAs to train PHMSA and State inspectors, particularly in the area of fatigue risk mitigation.

PHMSA will develop a guidance document and an advisory bulletin in the context of CRM regulations rather than address the issue through rulemaking. PHMSA has developed the draft requirements for team training and is circulating the document with others on the CRM team for comment. PHMSA is also drafting guidance material in the context of the current requirements.

### **Safety Recommendation P-12-8**

**Recommendation:** *Extend operator qualification requirements in Title 49 Code of Federal Regulations Part 195 Subpart G to all hazardous liquid and gas transmission control center staff involved in pipeline operational decisions.*

**Response:** PHMSA is proposing changes to operator qualification requirements in the NPRM titled “Pipeline Safety: Operator Qualification, Cost Recovery, and Other Proposed Changes” that will satisfy the recommendation. Specifically, PHMSA will take action to modify Section 195.446 to include the roles, responsibilities, and qualifications of those who have the authority to direct, or supersede, the specific technical actions of controllers. This NPRM is expected to be published in 2013.

### **Safety Recommendation P-12-9**

**Recommendation:** *Amend Title 49 Code of Federal Regulations Part 194 to harmonize onshore oil pipeline response planning requirements with those of the U.S. Coast Guard and the U.S. Environmental Protection Agency for facilities that handle and transport oil and petroleum products to ensure that pipeline operators have adequate resources available to respond to worst-case discharges.”*

**Response:** Following the Macondo Well incident, PHMSA implemented an action plan designed to fortify our planning and preparedness functions. Our action plan, plus this recommendation, drove PHMSA to redouble its work with counterparts in the U.S. Coast Guard (USCG), the Environmental Protection Agency (EPA), and the Bureau of Safety and Environmental Enforcement (BSEE) to revise the Preparedness for Response Exercise Program guidance, enhance communications with Area Committees, and improve the environmental protection provided by the most effective combination of federal response resources and tactics available for use along any onshore oil pipeline. We also drove Enbridge to make major improvements to its related spill response plans.

PHMSA has successfully coordinated a cooperative review of the revised Enbridge Facility Response Plan with the USCG, the EPA, and the National Energy Board (of Canada) resulting Enbridge making the needed changes to its response plan. This plan is now publically available and serves as the model for other pipeline operators.

There are differences in regulatory requirements, capabilities, and resources available among the various federal agencies involved with spill due to differences in mission, organizational size, and level of staffing.

PHMSA continues work with its counterpart agencies to better harmonize the objectives, content, form, and format of facility response plans to be consistent with the calculations and assumptions of the USCG regulations.

### **Safety Recommendation P-12-10**

**Recommendation:** *Issue an advisory bulletin to notify pipeline operators (1) of the circumstances of the Marshall, Michigan, pipeline accident, and (2) of the need to identify deficiencies in facility response plans and to update these plans as necessary to conform with the nonmandatory guidance for determining and evaluating required response resources as provided in Appendix A of Title 49 Code of Federal Regulations Part 194, "Guidelines for the Preparation of Response Plans.*

**Response:** PHMSA will be publishing an advisory bulletin to address this recommendation. The advisory bulletin will advise operators of the circumstances of the pipeline incident, reminds operators to conform to the guidance provided in Appendix A, and advises operators to consider the incorporated-by-reference material in their facility response plans and determine whether that information needs to be replaced with copies or synopses of the originating documents. This advisory bulletin will be published in 2013.

## CONCLUSION

PHMSA continues to make significant progress in continuous improvement of agencies of the pipeline safety program and seriously recognized our responsibility to fully address all NTSB recommendations. We therefore request your consideration for closing Recommendations P-04-1, P-11-8, P-11-9, and P-11-16. We will continue to work aggressively and without delay to close all remaining open recommendations.

PHMSA will continue to work with your office in the future as we continue our efforts to ensure the safe, reliable, and environmentally sound operation of the Nation's pipeline transportation system. If you have any questions or require additional information, please do not hesitate to contact me at 202-366-4433.

Regards,



Cynthia L. Quarterman