

Summary of Testimony of Andrew J. Black
Association of Oil Pipe Lines, President & CEO
before the
U.S. House Committee on Energy & Commerce
Subcommittee on Energy & Power
July 14, 2015

Liquids Pipelines Are Safe and Getting Safer

- Pipelines are among the safest ways to deliver the energy America needs
- The average barrel of crude oil or petroleum products reaches its destination safely by pipeline 99.999% of the time
- Since 1999, liquids pipeline incidents impacting the public or environment are down 50%
- Since 1999, corrosion caused pipeline incidents are down 76%
- Barrels released from liquids pipeline incidents PHMSA categorizes as significant are down approximately 50% over the last 20 years

Liquids Pipeline Operators Are Taking Action to Improve Pipeline Safety

- Liquids pipeline operators spent over \$2.2 billion last year evaluating, inspecting and performing maintenance on their pipelines
- In 2013, liquids pipeline operators launched the *Pipeline Safety Excellence*[™] initiative to improve industry-wide pipeline safety performance
- Pipeline operators through the *Pipeline Safety Excellence*[™] initiative adopted industry-wide pipeline safety values such as a goal of zero incidents, learning from experience and continuous improvement
- Numerous industry-wide groups, many shepherded by the American Petroleum Institute with whom we work closely on safety issues, are developing pipeline safety best practices and improvement tools in areas of leak detection, integrity management, operations, worker qualifications, control room management, public awareness and emergency response
- The liquids pipeline industry has increased its transparency by publishing annual industry-wide pipeline safety performance data showing where safety is improving and what challenges remain
- The liquids pipeline industry has an aggressive set of strategic goals and industry-wide initiatives to improve pipeline safety in areas of pipe inspection technology R&D, pipe cracking detection, diagnosis and response, comprehensive safety management systems, leak detection program management and emergency planning and response
- Examples of recent industry-wide pipeline safety improvement successes include:
 - Development, at the recommendation of the U.S. National Transportation Safety Board, of an industry-wide recommended practice API 1173 for Pipeline Safety Management Systems. This safety tool will allow pipeline operators to better manage the numerous pipeline safety efforts within their companies comprehensively and holistically
 - New pipeline specific emergency response tools, including a free, online pipeline emergency response training course for local first responders. These efforts earned AOPL and API this year's Norman Y. Mineta Excellence in Transportation Safety Award from the National Association of State Fire Marshals

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Thank you. I am Andy Black, President and CEO of the Association of Oil Pipe Lines. We represent transmission pipeline operators who deliver crude oil, refined products like gasoline, diesel fuel and jet fuel, and natural gas liquids such as propane and ethane. Our U.S. pipelines extend 192 thousand miles, safely delivering 14.9 billion barrels of crude oil and energy products annually. Today, my testimony is also on behalf of the American Petroleum Institute (API), with whom we work closely on pipeline safety improvement efforts.

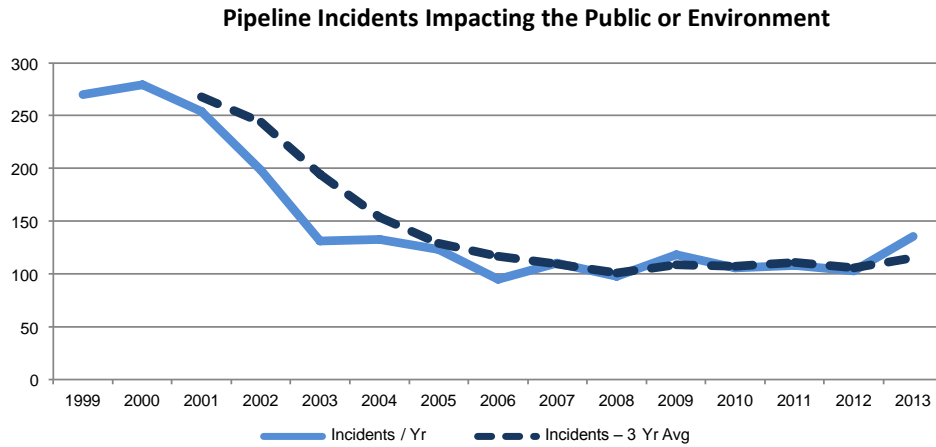
Pipelines play a critical role in delivering energy to American workers and families. Americans use the energy our pipelines deliver in their cars and trucks to commute to work or drive on the job. Farmers use propane for rural heating, crop drying, and livestock safety. American workers use raw materials like ethane for their good-paying manufacturing jobs.

Pipeline Incident Data Shows Improvements Over Time

Pipelines are an exceedingly safe way to deliver the energy America needs. The average barrel of crude oil or petroleum products reaches its destination safely by pipeline more than 99.999% of the time. Since 1999, pipeline incidents impacting the public or environment are down 50%. Corrosion caused pipeline incidents are down 76%.

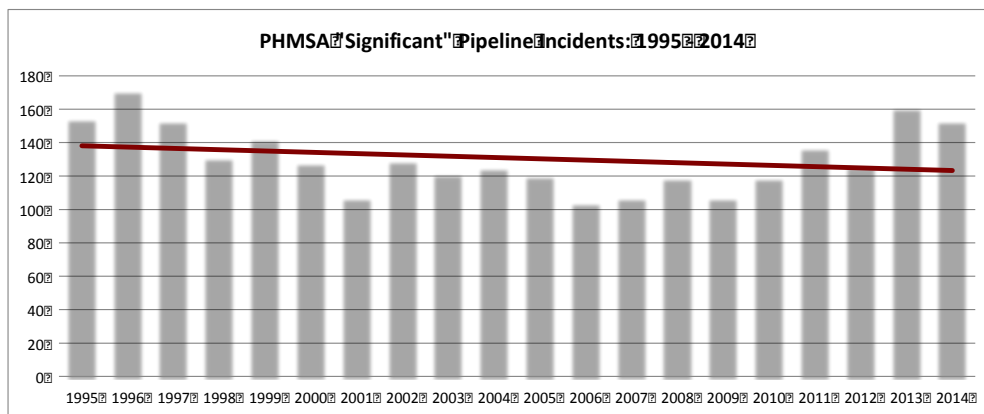
Pipeline operators review performance data carefully in an effort to identify areas for continued improvement. AOPL derives pipeline data from both PHMSA and the API Pipeline Performance Tracking System. Since 1999, API has tracked all liquids pipeline incidents over 5

gallons released to pipeline rights of way; releases that may impact the public or environmental spaces, in other words.



Source: Pipeline Right of Way Incidents, API Pipeline Performance Tracking System

There are many different ways to measure pipeline safety performance. For example, the table below displays incidents PHMSA categorizes as “significant”. This includes liquids releases of 50 barrels or more or \$50,000 or more in cleanup costs in 1984 dollars, at all locations including within operator facilities, regardless of the effects upon people and the environment. The trend line for the last 20-year period is relatively flat or shows a slight decline.

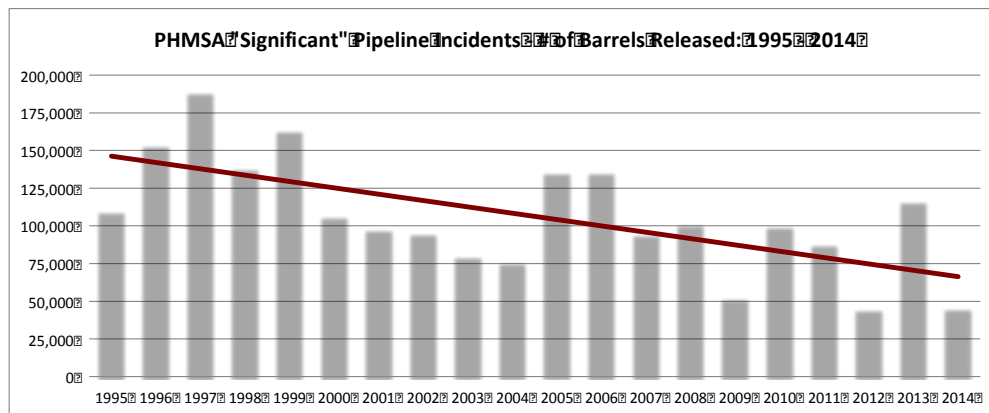


Source: PHMSA Incident Database, Significant Incidents, Hazardous Liquid Pipelines, Onshore, All Commodities

Industry experts on data mining, operations and safety performance are currently assessing the nature of the increase in incidents the last few years. Our preliminary analysis shows that these are predominantly smaller releases contained wholly within

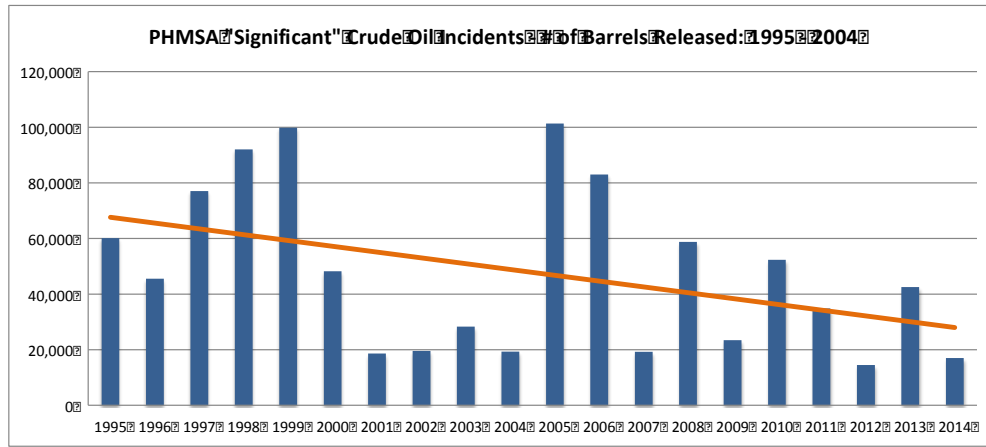
operator facilities, such as pump stations or tank farms. This is a dynamic we are currently analyzing for root causes and potential industry-wide action. Early reports show the causes are varied, and something that will take further in-depth analysis for a response plan.

Our main focus, and the focus of the majority of our safety improvement efforts is to protect the health and safety of our workers and the public as well as the environment from pipeline releases. Examining the number of barrels released from liquids pipelines using the PHMSA significant criteria shows a marked decrease in release amounts. Thus, while the number of pipeline releases is flat or ticks up or down over time, the amount of crude oil and petroleum products released from pipelines is down significantly over the last 20 years.



Source: PHMSA Incident Database, Significant Incidents, Hazardous Liquid Pipelines, Onshore, All Commodities

Review of just crude oil pipeline incidents reflects the same downward trend in crude oil barrels released since 1995. A trend analysis of PHMSA significant crude oil releases over the last 20 years reveals a 50% decrease in release amounts, but that is not enough.



Source: PHMSA Incident Database, Significant Incidents, Hazardous Liquid Pipelines, Onshore, Crude Oil Only

This time horizon allows policymakers to judge the effectiveness of pipeline safety programs put in place by Congress and technological advances over time. The late 1990s and early 2000s saw passage of pipeline safety laws and the implementation of the pipeline Integrity Management Program. The Integrity Management Program requires regular evaluation, inspection and maintenance of pipelines in high-consequence population and environmentally sensitive areas. PHMSA incident data shows the large decrease in barrels released since implementation of the Integrity Management Program.

Similarly, the last 20 years have seen the widespread use of smart pig, in-line inspection (ILI) technology. These devices travel through the pipelines scanning for defects in the metal or potential signs of denting or corrosion. Magnetic resonance technology detects metal loss in pipe. This technology has helped produce a 76% drop in corrosion caused incidents since 1999.

Even with these improvements in pipeline safety over the last 15 years, we know today we need to keep improving pipeline safety even further and are committed to doing so. While pipelines remain the safest method of transporting liquids, we must keep working toward our goal of zero incidents. Last year, liquids pipeline operators spent approximately \$2.2 billion evaluating, inspecting and maintaining their pipelines. This significant spending shows that

while pipeline incidents are relatively rare, we are expending a great amount of resources to make them even rarer.

Many Efforts Are Underway to Improve Pipeline Safety

Two years ago, liquids pipeline operators launched the *Pipeline Safety Excellence*TM initiative. It includes shared pipeline safety principles, such as the goal of zero incidents. It also calls for increased transparency, reflected by the safety performance results discussed above.

*Pipeline Safety Excellence*TM also reflects the work of nearly a dozen industry-wide groups, many shepherded by API, dedicated to improving pipeline operations and safety. They are made up of pipeline operator personnel volunteering their time and efforts in pursuit of industry-wide pipeline safety improvements:

- *Pipeline Safety Excellence Steering Committee* – pipeline operator executives guiding and ensuring pipeline safety performance achievement
- *Performance Excellence Team* - pipeline operator senior managers sharing safety improvement techniques and advancing data management, safety culture and damage prevention initiatives
- *Operations & Technical Group* – pipeline operations and engineering managers overseeing industry-wide pipeline recommended practices and coordination of research and development activities
- *Pipeline Integrity Work Group* – pipeline integrity managers pursuing advances in pipeline integrity management and developing industry-wide consensus recommended pipeline integrity practices

- *Cybernetics Group* – pipeline control systems managers sharing advances and lessons learned about leak detection technology and pipeline control systems
- *Public Awareness Group* – pipeline community outreach managers improving programs to raise public awareness of local pipelines and “call before you dig” programs
- *Operator Qualification Work Group* – pipeline managers ensuring operator qualification practices meet requirements and contribute to safe operations and operating culture
- *Environment, Health & Safety Group* – pipeline managers promoting environment, health and personal safety issues within pipeline operators
- *Leadership Teams* – pipeline managers and subject matter experts pursuing targeted initiatives to improve safety priorities, such as emergency response capabilities and research and development

Through these pipeline safety improvement groups, pipeline operators are developing industry-wide API recommended practices and standards on everything from pipe metal qualifications to proper welding techniques. API and AOPL members are promoting third-party damage prevention programs and funding research and development on new pipeline inspection technologies.

The *Pipeline Safety Excellence*[™] initiative also includes an annual Liquids Pipeline Safety Performance Strategic Plan of initiatives approved by the leadership of the pipeline industry for executive-level attention, support and resources. Strategic pipeline safety improvement efforts are organized into four goals: 1) improve inspection technologies, 2) enhance threat identification and response, 3) expand safety culture and management practices, and 4) boost response capabilities.

Our pipeline safety improvement strategic goals are at the heart of preventing and minimizing pipeline incidents. They involve improving the tools pipeline operators use, the skills of their employees, and the capabilities of their organizations. They address issues of technology, procedures, management and leadership.

Strategic Initiatives under the strategic plan reflect recommendations from safety investigators, lessons learned from pipeline incidents and review of safety performance data. In developing our Strategic Initiatives, we seek to address the recommendations of the National Transportation Safety Board and advisory bulletins from PHMSA. We also incorporate lessons learned from past releases, such as Marshall, Michigan and others, to make safety improvements in areas identified by those incidents. While results of the investigation of the recent Refugio, California release are not yet available, we look forward to understanding the root causes of that incident and addressing any recommendations for safety improvement. The specific Strategic Initiatives we have underway for 2015 include:

Goal 1: Improve Inspection Technology Capabilities

- 1.1 Improve In-Line Inspection (ILI) “Smart Pig” Technology Capabilities to Detect Pipeline Cracking

Goal 2: Enhance Threat Identification & Response

- 2.1 Implement New API Recommended Practice on Crack Detection Analysis and Response

- 2.2 Implement New Industry-Wide Guidance on Integrating Pipeline Threat Data
- 2.3 Develop Industry-wide Guidance on the Appropriate Uses of Hydrotesting to Ensure Pipeline Safety

Goal 3: Expand Safety Culture & Management Practices

- 3.1 Implement New API Recommended Practice on Pipeline Safety Management Systems
- 3.2 Foster Pipeline Safety Culture with an Industry-Wide Sharing, Learning and Improvement Program
- 3.3 Develop an Industry-Wide Construction Quality Management System

Goal 4: Boost Response Capabilities

- 4.1 Implement New API Recommended Practice for Pipeline Leak Detection Program Management
- 4.2 Deploy a Nation-wide Pipeline Emergency Response Training, Outreach and Standards Program

Work on each of these Strategic Initiatives is underway, continuing throughout 2015 and into 2016. Pipeline industry executive leaders recently approved the addition of a new 2016 Strategic Initiative to expand industry-wide guidance on river-crossing management, with a particular attention toward scouring. More information on all of the 2015 Strategic Initiatives can be found at: <http://www.aopl.org/wp-content/uploads/2015/03/2015-Annual-Perf-Report-Strategic-Plan-Mar-3-s.pdf>.

An example of one of our most recent safety successes is the development of API Recommended Practice 1173, Pipeline Safety Management Systems, a new tool to manage comprehensively and holistically all of the different pipeline safety activities across a company. The U.S. National Transportation Safety Board recommended the pipeline industry develop a Pipeline Safety Management System after the 2010 Marshall, MI pipeline release. We worked together with liquids and natural gas pipeline operators, federal regulators such as PHMSA, state regulators, process safety experts, and members of the public over a stretch of two years to reach agreement on this important advance in pipeline safety. Over that time, we consulted with safety experts within other industries successfully using safety management systems to improve safety in their sectors. While the journey to complete RP 1173 was long and somewhat trying at times, the final product takes pipeline safety to a whole new level by fully embracing NTSB's recommendation. We look forward to working with PHMSA and others as we begin its implementation, and I believe have the opportunity to take pipeline safety to a whole new level with this new tool through implementation of Pipeline Safety Management Systems.

Another success story is the work of our API-AOPL Emergency Response Team. Formed two years ago, it has developed free, online training for local first responders. Some local fire and police departments, especially volunteer departments in rural locations, told us they just did not have the resources to obtain pipeline specific emergency response training. We responded to this need by bringing the pipeline training to them, free of charge, through an online correspondence course. This and other pipeline emergency response tools can be reached through the website www.PipelineEmergencyResponse.com.

For these efforts, I will proudly travel later this month to Nashville, TN and the annual meeting of the National Association of State Fire Marshals to receive their Norman Y. Mineta

Excellence in Transportation Safety Award. Presented this year to API and AOPL jointly for the work of our Emergency Response Team, this award is given annually to an individual or team that has made a significant and lasting contribution to the safety of people, products and materials in transit. Through this award, state fire marshals recognize individuals and teams that have encouraged transportation safety standards above what is required, and have worked to ensure the safety of emergency responders.

As you can see, while the liquids pipeline industry has made great strides to advance pipeline safety, there is much work underway to further improve pipeline safety performance. I look forward to answering your questions on what has worked and areas where we can make further improvements.

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