

Safe Pipelines

Know what's below

A Publication of the Pipeline Safety Trust

Fall 2015

Champion of Change

Our executive director, Carl Weimer, was honored as a Champion of Change at the White House on October 13th. The Champions of Change program was created as an “opportunity for the White House to feature individuals doing extraordinary things to empower and inspire members of their communities.” Carl was nominated by PHMSA, and was selected as one of eleven Champions from hundreds of nominees. Information about the others who were honored and the overall Champions of Change program at the White House can be found at: <https://www.whitehouse.gov/champions>

“This year’s nominees are a truly gifted group of individuals who have exceptional vision and foresight when it comes to the issues we are dealing with in transportation,” said Secretary Foxx. “Their exemplary leadership is charting the course for our 21st century needs. I applaud them and I hope to see others follow their lead.”

While introducing Carl at the ceremony, Marie Therese Dominguez, PHMSA’s Administrator, said Carl was receiving this recognition for his leadership in working with community and industry groups alike to improve pipeline safety, and

successfully advocating for stronger pipeline safety regulations at the local, state and federal level.

Upon being notified that he was receiving this honor Carl said, “I am thrilled to be recognized by the White House for my efforts to be a strong independent voice for pipeline safety, and for encouraging other citizens and local

government officials to join with me in these efforts. With the rapidly expanding pipeline infrastructure in this country, and an increasing number of pipeline failures, it is important that the public is given a greater role in pipeline safety discussions since the public is often who pays the price when pipelines fail.”



Carl Weimer and USDOT Secretary Anthony Foxx



Excerpted from the White House Blog:

“In 1999 I was blissfully unaware of the pipelines that ran through my community in Bellingham, Washington. Then in a split second a pipeline burst and dumped nearly a quarter million gallons of gasoline into a salmon stream that our community had spent hundreds of thousands of dollars and countless volunteer hours to clean up and restore. That gasoline flowed nearly two miles down that stream until it exploded and burned killing three boys playing in a park and every living thing in that salmon stream. That is how my community learned about the pipelines in our midst, and that while we all enjoy the benefits of the fuel those pipelines carry, pipelines also bring serious safety issues that were not being adequately addressed by the pipeline industry or federal regulators.

In our grief and anger our community set out to ensure that such a tragedy would never happen again. I was privileged to help

lead a community effort, which was ultimately embraced by local and state elected officials and the U.S. Justice Department, to create a national watchdog organization to provide a strong, independent, public interest voice to increase pipeline safety. That effort led to the creation of the Pipeline Safety Trust, which I have had the pleasure of leading ever since.

The Pipeline Safety Trust has had significant success working with everyone and anyone who is truly interested in making pipelines safer. We have substantially increased the transparency of pipeline information so citizens and local governments can be a legitimate part of pipeline safety efforts, and helped pass new laws at the local, state and federal level. While there continue to be tragedies in communities due to pipeline failures, we have succeeded in raising the national dialogue and for the first time aligning the pipeline industry, regulators and safety advocates to work toward the shared goal of zero pipeline failures. We will continue to provide accountability toward that goal.”

Carl Weimer is the executive director of the national Pipeline Safety Trust, and also serves as an elected member of the Whatcom County Council.



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Mission of the Trust

The Pipeline Safety Trust promotes pipeline safety through education and advocacy, increased access to information, and partnerships with residents, safety advocates, government, and industry, resulting in safer communities and a healthier environment.

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May 2015 Refugio Beach spill in Santa Barbara, CA: Early Lessons And Lots Of Questions

May 19th started out as any other beautiful sunny day on the California coast northwest of Santa Barbara. Unfortunately, sometime during that day, for reasons that are not yet completely clear, a pipeline operated by Plains All-American Pipelines, known as line 901, failed, spilling a large volume of oil – in excess of 140,000 gallons – down a bluff, through a culvert under a U.S. highway and a railroad track, and out onto Refugio State



Britta Gustafson

Refugio oil spill cleanup on May 22, 2015, two days after the spill. Seen from the Amtrak Coast Starlight train in Santa Barbara County.

Beach. Because of the tardiness of the initial clean up attack, the spill quickly spread down the coast to other beaches, acres of open water, and eventually produced tar balls found more than a hundred miles away. Until PHMSA completes its investigation and issues a report, and perhaps even after that, the public likely won't be made privy to everything that went wrong and all of the decisions that went in to the response.

But here are some things we know, some early lessons, and some things that suggest that corrosion – the one cause that is predictable and preventable and completely within the operators' control – is an increasingly large problem, at least among hazardous liquid lines in California, and perhaps particularly among crude oil lines.

The first PHMSA corrective action order (CAO), issued May 21st gave some hints as to the probable cause of the failure. The CAO mentioned or described:

- An operational issue with fluctuating pressure that morning;
- Shrink wrapped girth welds, and previous corrosion anomalies near girth welds;
- Previous external corrosion areas both near welds and unrelated to welds;
- More than 50 areas of external corrosion that had been dug up and investigated following in-line inspection (ILI) runs in 2007 and 2012; and
- An assessment of the pipeline by an ILI tool, or smart pig, on May 5, just 2 weeks before the rupture (results of the assessment had not been received by the operator at the writing of the first CAO).

The amended CAO, issued June 3rd, provided additional details of the failure:

“The rupture characteristics at the Failure site indicate a longitudinally oriented opening approximately 6 inches in length and located in the bottom quadrant of the pipe. Third-party metallurgists in the field estimated that corrosion at the Failure site had degraded the wall thickness to an estimated 1/16 of an inch (0.0625”). This thinning of the pipe wall is greater than the 45% metal loss which was indicated by the recent ILI survey.”

Continued on page 3

Lots and Lots of Questions Remain

Why did a pipeline installed in the 1980s have external corrosion that reduced its wall thickness from 0.344 to 0.0625 inches in 2015 – more than an 80% wall loss, less than 3 years after its last ILI run – and after 41 anomalies were excavated following that 2012 run?

Why did the May 5th ILI run indicate that the wall loss at the site of the rupture was 45% metal loss, rather than the 80% that was discovered after the rupture two weeks later?

And, if the cathodic protection (CP) system on the ruptured line was sufficient to prevent external corrosion, why is there so much external corrosion on the line?

As for the investigation and cleanup: Why were responders so slow to get boots on the ground to keep as much oil as possible onshore; why were boats so slow to arrive in large numbers? Were the responders slow to ramp up, or was Plains slow in calling them? A Unified Incident Command member was quoted as saying that they spent the first day “planning” the response. Operators, resource agencies and first responders spend buckets of money every year to produce, review and drill on response plans precisely so that no time is wasted in planning when a response is required. Were plans inadequate, was training inadequate, were resources just not called on in a timely manner?

And speaking of buckets, how ‘bout those neighbors who went to the local Home Depot for stacks of 5 gallon buckets and took them to the beach to start the cleanup on their own, out of frustration that the beaches were full of oil with no official clean up in sight?

Is there an agency reviewing the response in this spill to identify the shortcomings and fix them? PHMSA reviews spill response plans for adequacy under the Oil Pollution Act. Is part of its investigation looking at the implementation of the approved spill plan and whether it was followed and whether it was adequate in the first instance?

Plains somehow got the unified command staff to agree to extraordinary (at least we hope they are extraordinary) measures in dealing with the media and public: An agreed upon Media Briefing proposal that went so far as to identify individual reporters who Plains thought were “neutral to positive” and might help get out “the story of progress” (<http://media.independent.com/news/documents/2015/06/22/doc10134320150617181237.pdf>). You can find more conversations about this document on our listserv here: <https://groups.yahoo.com/neo/groups/safepipelines/conversations/topics/27362>. Why would response agencies agree to give the responsible party (Plains) essentially complete control over the media releases on the spill response, including the pictures released, the timing and location of media briefings, and control over access to the unified command offices? Why continue tying their own credibility to Plains’ after several briefings when Plains simply chose not to answer certain questions, and particularly after its spokesperson told a state Senator that the “first he had heard of any corrosion”

was what he saw in the paper? This, after the line had had three ILI runs since 2007, and had more than 55 integrity digs for ... - wait for it -.... external corrosion.

The book on this spill is not nearly closed. As of this writing, PHMSA hasn’t issued an investigation report; the studies ordered on the failed pipe section have not been released; multiple shareholder lawsuits have been filed by investors who saw major losses after the spill, and now say they relied on Plains’ representations that a spill was “very unlikely”; state and federal criminal investigations have been opened; three bills have passed in the legislature and been signed by the Governor that will change pipeline safety rules in California; and surely someone will look into why the response was so slow.



Oil spill from Plains All American Pipeline near the Refugio Beach park and campground in Santa Barbara County, CA on May 19, 2015

Until we know what will be revealed by all of those activities, here are some statistics to ponder about corrosion:

Nationwide, corrosion has been holding steady as a cause of about 25% of all significant incidents on all onshore hazardous liquid pipelines; similarly, it’s holding steady as a cause of about 36% of all crude oil significant incidents over those same average year spans.

Those are numbers the industry should drastically improve. Those are incidents within the operators’ control to prevent.

When we focus on California, there are several things that are particularly disconcerting:

Not only is the number of significant incidents on hazardous liquid lines trending up, it took a big jump in 2014 to the highest number of significant incidents since 1997. Moreover, the percent of significant incidents caused by corrosion has climbed as well; for all onshore hazardous liquid incidents in California, corrosion accounts for an average of 41-53% of those incidents over the last 3- 5- and 10-year averages.

Looking specifically at crude oil, the numbers are even worse: Significant incidents in onshore crude oil lines jumped in 2014 to nearly double the annual average of the previous 20 years. As for corrosion as a cause: over 10-year, 5-year, and 3-year averages, corrosion has climbed from causing over half of the significant incidents on onshore crude oil lines to causing more than two-thirds of those incidents. The numbers involved here are not large, given one product in onshore lines in one state, but the trends are especially troublesome, particularly because, again, corrosion prevention is completely in the hands of the operators. ■

The Smart Pig

smartpig@pstrust.org



In pipeline parlance, a smart pig is a high-tech device designed to root around inside pipelines. These intelligent little beasts inspect every square inch of the line, calling attention to any needed repairs.

I try to do the same thing for our readers. Send me a question and I'll root through the labyrinth of modern pipeline prevarications to get you the best answer

piggily possible: the straight scoop, as we say back in the sty.

Editor's Note: The views and opinions expressed by this pig do not necessarily reflect those of the Pipeline Safety Trust or any human being.

Dear Nick and Nora -

There are a lot of new pipelines being proposed, and that means there are a lot of folks like you who need basic information about pipelines, how they're built, how they're regulated, who's in charge and how the system works. Several years ago, the Pipeline Safety Trust wrote a series of briefing papers aimed at folks like you - new to the pipeline safety world. They've recently updated all of those papers and produced three new ones, so there are now 15 papers on various topics for you to peruse. These papers are a great source of 'Pipeline Safety 101' information - they are short and each focused on a single topic. They do not need to be read in order, though some basic understanding is helpful before reading about the more technical issues.

You can find them here or on our [website](#):

- PST Briefing Paper #01 - [Who We Are](#)
- PST Briefing Paper #02 - [Natural Gas Basics](#)
- PST Briefing Paper #03 - [Hazardous Liquid Basics](#)
- PST Briefing Paper #04 - [Pipeline safety statutes, regulations, consensus standards, recommended practices](#)
- PST Briefing Paper #05 - [The Alphabet Soup of Players in Pipeline Safety](#)
- PST Briefing Paper #06 - [Thinking About Risk](#)
- PST Briefing Paper #07 - [Excavation Damage Prevention](#)
- PST Briefing Paper #08 - [The Need For Better Planning Near Pipelines](#)
- PST Briefing Paper #09 - [Pipeline Routing and Siting Issues](#)
- PST Briefing Paper #10 - [Integrity Management](#)
- PST Briefing Paper #11 - [Cost Benefit Analysis](#)
- PST Briefing Paper #12 - [Emergency Response and Spill Response Planning](#)
- PST Briefing Paper #13 - [Getting Information and Answers from PHMSA about Pipeline Safety](#)
- PST Briefing Paper #14 - [Jurisdictional Issues](#)
- PST Briefing Paper #15 - [Access to Pipeline Statistics and Data](#)

Dear Smart Pig: I live in a midwestern state on a large farm. It seems like every month we hear about another big oil or gas pipeline coming through the region, and we can't help but think that it's only a matter of time before one wants to go through this area. We know nothing about pipelines and don't even know where to start looking for information. Can you help?

*Nick and Nora Newbie,
Crossroads County*

*The
Smart
Pig*

Trust But Verify

In this issue we are starting a new column based on President Reagan’s memorable phrase – Trust But Verify. In it we will discuss pipeline safety issues that the public is expected to trust what industry and regulators tell us, but are given no way to verify whether what we are being told is accurate. This lack of an ability to verify what is being stated as fact undermines trust, especially when we continually catch both industry and regulators stretching the truth.



Photo: Jeffness at English Wikipedia

Pre-planned Spill Drills

Recently Enbridge and a variety of federal and state agencies conducted a well-publicized drill of spill response capabilities for the pipeline that runs under the Straits of Mackinac that connect Lake Michigan and Lake Huron. Many have stated this is one of the worst possible places a pipeline could fail, and there has been much scrutiny and angst surrounding the location of this pipeline, so it is certainly a good thing that the company and agencies would want to test their spill response capabilities there. This particular drill was pre-planned for months in advance, and from afar it appeared as much attention was being paid to the optics of the drill as the actual results. While we have no doubt there is benefit in getting all the involved parties together to make sure they know who will do what when, that they have the right contact info for each other, and that a clear chain of command has been established we have no way of verifying that pre-planned emergency response drills actually provide much assurance that things will be handled correctly in a real emergency? There have been too many recent incidents, such as the spill earlier this year off the coast of Santa Barbara, where real responses seemed far too slow and unorganized. Would they have been even worse if preplanned exercises had not been taking place over the past years?

So why don’t agencies do unannounced drills? We would love to see how a company would perform if instead of a carefully orchestrated event the agencies just called the pipeline operator a 4:30 AM and said, “looks like you’ve got 20,000 gallons of oil bubbling up in the Straits of Mackinac, show us what you can do about that in the next 24 hours.” That would seem to be a real test

of how well a company is prepared. So why are such drills so rare to nonexistent? PHMSA has told us they do not believe in such drills because an unannounced drill could undermine a company’s preparedness in case a real spill happened during that time. There is probably some truth in that, but doesn’t being prepared mean being prepared for more than one problem at a time? What if a real spill had occurred on the Enbridge pipeline under the St Clair River while they were all parading their expertise in the preplanned drill at the Straits of Mackinac, did all that extra time allow them to be prepared for that? With lack of access to spill response plans, no surprise drills to see what really happens, and so many questions and so little way for the public to verify the answers given, this is another case of where the public has to just trust what the industry and regulators are telling us. ■

An oil pipeline lies underwater near the The Mackinac Bridge leading to Michigan’s Upper Peninsula



Beth Wallace

A pipeline marker with the Mackinac Bridge in the background

FERC Staff Releases Best Practices For Industry Outreach Programs To Stakeholders

We are always pleased to see agencies making efforts to improve the level of outreach and engagement between pipeline companies and the public. In what may seem like a call for operators to exercise some simple common sense in dealing with the public on applications for new FERC certificates, the environmental staff of the FERC Office of Energy Projects has produced a [handbook](#) describing what they perceive as industry best practices for outreach to the public in pursuing new pipeline projects.

Community outreach done poorly – sending vaguely threatening letters about surveyors before any other outreach has been done, setting up poorly timed and poorly designed meetings that provide little information, not having easily available, constantly updated informational materials accessible in a variety of means, having 800 numbers that aren't staffed or answered – these missteps are often the starting points for community opposition to a project, and in extreme cases, operator-created activists opposing a project.

The new FERC handbook identifies and explains a variety of methods to make contact with and engage the public and other specific stakeholder groups when putting together a FERC application. They break out the types of FERC projects that require varying levels of public engagement into three categories, and advise operators on the types of public outreach and education methods that might be appropriate for each, and at what stage of the project each might be most important and productive.

For example, under “Initial Communications”, the handbook recommends an initial letter, including parcel level maps for landowners who might be affected, followed by community meetings. Importantly, the handbook points out two important aspects to making these meetings productive: 1) having them early - before anyone is approached about surveys or easements; and 2) that the staff believes it is “beneficial” to have a community meeting with a formal question and answer format with the applicant directly.

“Stakeholders routinely request that the companies themselves hold a formal question and answer meeting to address their questions during the early stages of a project. Commission staff believes this is beneficial. Often a local elected official or a local agency will conduct these meetings; the company and FERC staff may attend to answer stakeholder questions, as appropriate. These types of meetings are generally more productive when hosted and moderated by a local entity acting as/serving as a neutral party.” p.14-15.

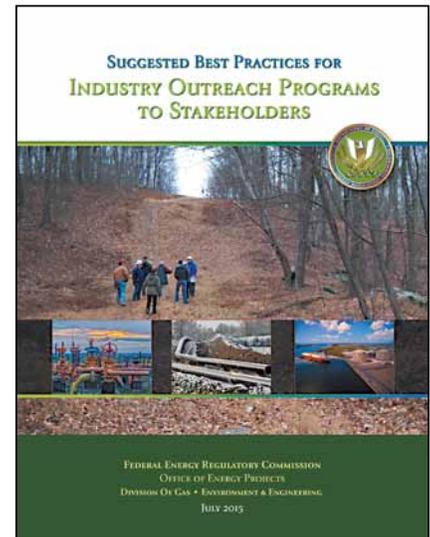
From our experience at the Trust answering many, many communications from concerned neighbors, we can concur with the FERC staff that a true public meeting is much

more useful – where questions can be asked and answered in front of the public; where neighbors can hear directly from the operator, preferably directly from the operator's project staff who are knowledgeable about the project and free to answer questions (rather than a public relations consultant).

As the handbook points out, once in the pre-filing process, the regulations require the operator to hold open houses in communities along the proposed route. The regulations do not, however, stipulate the format for these open houses. The typical operator's open house frequently serves to frustrate and anger many members of the public who simply want more information. Typical open houses, rather than having a question and answer session with the collected group, divides the crowd and sends them to a number of informational tables. They frequently occur after notices requesting survey permission have gone out so the community is already wary. This open house format used by most operators is particularly frustrating for those who want more information but may not want to or be able to tromp to a number of different tables, may not get through a line to get their questions asked, may wait through a line only to be told they are at the wrong table, may not want to ask a question in public, or may not trust that they got the same answer as another person with the same question. Because different members and segments of the public will be more comfortable with different meeting formats, outreach could drastically improve by planning a variety of types of public meetings and open houses or a combination of the two, where it is clear what types of information will be available.

We also particularly encourage local governmental bodies to host informational meetings about proposed projects and invite the operator and agencies to come answer questions from the members of the governmental body and from the public. This format has the benefit to the operator of built-in crowd control mechanisms of the governmental body, dispelling the operator's possible concerns about unruly crowds, while being a setting where the public has more confidence that the answers being given to them and their elected leaders are perhaps more reliable than those in a less public setting.

Kudos to the FERC staff for recognizing that operators need to improve their outreach efforts, and for publishing this handbook in an effort to provide some suggestions. ■



Opportunity to Comment on Proposed PHMSA Rules on Hazardous Liquid Pipeline Safety

PHMSA published a Proposed Rule in mid-October on the safety of hazardous liquid pipelines. The Proposed Rule is a follow-up to an earlier Advanced Notice of Proposed Rulemaking published in October 2010 and the comments received in response to that. The Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 passed by Congress included 42 mandates for PHMSA, some of which are potentially addressed through this rulemaking.

Here we include a brief rundown of what this proposed rule contains. We strongly encourage individuals, community groups, and local governments to consider commenting. Comments are currently due by January 8, 2016. If you have an opinion about the proposal, let it be known.

Go to Docket number “PHMSA-2010-0229” on <http://www.regulations.gov> to see the proposed rule, supporting documents, other comments, and to submit your own. Check out our new web page on this and other opportunities for participation and getting your voice heard for additional information. <http://pstrust.org/finding-info-and-getting-involved/participation-opportunities/>

In the past, these PHMSA proposals have represented a high watermark, with industry pressure weakening them prior to the publication of a final rule. We are available to help you make sense of the rule, and plan to publish more information to help those interested in commenting, so please contact us and watch our website for more information.

The Notice of Proposed Rulemaking on the Safety of Hazardous Liquid Pipelines:

- **Extends the requirement to do inline inspections of hazardous liquid pipelines outside of high consequence areas, with an inspection frequency of every 10 years** (inspections are already required inside HCAs). Inline Inspections (ILI) are one aspect of integrity management rules which are required of all hazardous liquid pipelines that could effect a high consequence area (HCA). ILI typically involves running a ‘smart pig’ or other inspection device through the pipeline that is able to assess corrosion, deformation and other problems. This is not the same thing as extending the integrity management rules to all areas as it does not require a full risk assessment and mitigation for those threats.
 - **Requires the use of leak detection systems on hazardous liquid pipelines in all locations.** Good leak detection can potentially catch pipeline ruptures quickly and help mitigate their impacts. The problem is a lack of a standard for leak detection that clarifies how the systems need to perform. We are concerned that this new requirement may be meaningless without such a standard.
 - **Changes the criteria and timing for hazardous liquid pipeline repairs.** Currently, repairs are categorized and subject to certain criteria depending on the pipeline problem’s severity, and are applicable mainly to pipelines in HCAs. The changes add additional criteria for repairs, and also change the timing for when the repairs need to be complete. They also apply the criteria with an extended timeframe for pipelines outside of HCAs.
 - **Requires pipelines in HCAs to be able to accommodate inline inspection tools within 20 years, unless the basic construction prevents it.** ILI tools have been an industry standard for decades, and we don’t understand why PHMSA is giving operators 20 additional years to make sure their pipelines can accommodate this important inspection technique. It is also unclear how they will define the exemption, and what the impact will be of allowing an exemption for certain pipelines with a type of construction that won’t allow ILI passage.
- There are other aspects of the rule, but these are the main proposals included. It is also important to note what is not included. The proposed rule **does not**:
- Include a performance standard for leak detection;
 - Include a requirement to maintain depth of cover at river crossings to prevent scour or increase the required minimum depth at construction;
 - Require changes in valve assessment, valve placement, or require automated valves; or
 - Change hydrotesting requirements or verification of maximum operating pressure. ■
- **Extends all reporting requirements to hazardous liquid gathering lines.** Currently many gathering pipelines are completely unregulated. We know very little about the mileage of these lines or the incidents they are involved in. Under the proposal, all gathering line operators will have to submit annual reports and incident reports in a similar way that other pipeline operators already do. Reporting requirements are also extended to hazardous liquid pipelines that move product by gravity.
 - **Requires inspections of hazardous liquid pipelines in areas affected by extreme weather, natural disasters, and other similar events within 72 hours.** While we would expect that the general regulations requiring operators to maintain safe pipelines would already have covered this issue, now it will be explicitly stated in the regulations. This proposal simply requires operators to be reactive, not proactive as we would have hoped. It does not address maintaining depth of cover on river crossings (an issue in many flood events), or other preventative measures to lessen the risk of extreme weather damage in the first place.

State Reporting of Excavation Damage

How many times do excavations result in a hit to a pipeline? How many times do they result in a pipeline incident? No one disputes that excavation damage is a serious and preventable cause of pipeline damage, and more can be done to decrease its prevalence. But it is challenging to find detailed data that allows for an understanding of exactly what is happening with excavation damage and pipelines.

You'll see in the Transparency Review that few states score well on the excavation damage data they provide. We like to see states that link to the Pipeline and Hazardous Materials Safety Administration (PHMSA) state damage prevention pages, and states that provide details of specific excavation damage events. We think it's useful to look not only at excavation damage that causes a pipeline incident (according to PHMSA), but also at excavation damage that may have been a 'near miss' or caused any kind of damage to the pipeline, even if it did not result in a reportable incident occurring. This kind of information can be very difficult to find.

PHMSA maintains state and national data on pipeline incidents – including incidents caused by excavation damage. In 2014, excavation damage was the cause of 704 pipeline incidents in the U.S. (28% of gas distribution incidents and about 5% of hazardous liquid and gas transmission incidents together).

The Common Ground Alliance maintains a reporting tool called DIRT (damage information reporting tool) for all excavation damage to utilities (not just oil and gas pipelines), and offers their data presented in many different ways including by type of facility damaged. In 2014, there were 87,842 U.S. damage events reported involving hazardous liquid and natural gas pipelines.

There is a huge difference between the 87,842 pipeline damage events reported through DIRT and the 704 pipeline incidents caused by excavation damage reported through PHMSA – both in the year 2014.

We know that state enforcement programs have a positive effect on damage rates, helping them to go down. PHMSA this year issued a Final Rule establishing review criteria for state excavation damage prevention law enforcement programs, and we anticipate heightened scrutiny of these programs in the future, as they are an important component of a state's overall pipeline safety efforts. The Common Ground Alliance supports fair enforcement, and includes a chapter on this issue – with 5 suggested best practices for states to follow – that is included in their Best Practices manual.

What we would like to see is information on state pipeline safety program websites that lets us know about excavation damage to pipelines in a way that fills in the gaps between what is available from PHMSA on state excavation damage incidents, and what is reported through DIRT on damage to pipelines that may or may not have caused a reportable incident. Some states – like Texas – have a searchable docket of all their excavation damage events (including those which are not considered incidents under the PHMSA definition). This is great to see – and it is also very helpful for the public to see some basic summary information of this sort of data, as well as links to the PHMSA state excavation damage data.

PHMSA on state excavation damage incidents, and what is reported through DIRT on damage to pipelines that may or may not have caused a reportable incident. Some states – like Texas – have a searchable docket of all their excavation damage events (including those which are not considered incidents under the PHMSA definition). This is great to see – and it is also very helpful for the public to see some basic summary information of this sort of data, as well as links to the PHMSA state excavation damage data.



Thank You To The Conference Travel Sponsors!



We would like to thank the American Gas Association, Avista, Enbridge and Marathon Pipe Line LLC for their generous donations over the past year to our Citizen Travel Fund. These donations provide money to cover the costs of travel so more citizens can participate in our annual conference and other important pipeline safety meetings. The Pipeline Safety Trust does not accept corporate donations for general operating funds, but we are happy to use donated dollars to help citizens who would not otherwise be able to do so attend the annual conference. We believe that greater citizen involvement in pipeline safety discussions leads to better outcomes and builds trust in the nation's pipeline system. Thanks again to these companies for supporting our citizen involvement efforts.

If you or your company would also like to support greater citizen participation visit our website at: <http://pstrust.org/travel-assistance-donations>

Transparency Review of State Pipeline Websites

The Trust has surveyed all the different state pipeline safety agency websites since 2011, and scored them based on the ease of finding what an interested citizen might want to find. Nearly all states have a regulatory body focused on some aspect of pipeline safety within their state, though the specifics vary a great deal.

Finding information does not need to be difficult – we use scoring criteria to review state agency websites on the transparency of their pipeline safety information. Our fifth annual review is presented here, and is on our website under “Transparency of Pipeline Information.”

	Finding agency web site	Contacts for agency staff	Access to statutes, regulations	Describe what state regulates	Transmission pipeline maps	Pipeline company contact info	Enforcement data	Incident data	Inspection records	Siting & routing info	Excavation damage data	Total (out of a possible 33 points)
Arkansas	3	3	3	3	3	3	3	3	3	3	2	32
Washington	3	3	3	3	3	3	3	3	3	3	2	32
PHMSA	3	3	3	3	3	3	3	2	1	1	2	27
Maine	3	3	2	3	3	3	2	2	1	2	2	26
South Dakota	3	3	3	3	3	3	2	2	1	0	2	25
Connecticut	3	3	3	3	3	2	2	2	1	0	2	24
Colorado	3	3	2	3	3	1	2	2	1	0	2	22
Minnesota	2	3	3	3	3	2	2	2	0	0	2	22
Nevada	3	3	3	2	3	1	2	2	0	1	1	21
West Virginia	3	3	2	2	3	2	2	2	0	0	2	21
Mississippi	3	3	2	2	3	1	2	2	0	0	2	20
Kentucky	3	2	2	2	3	2	2	2	0	0	2	20
Texas	3	0	3	2	3	2	2	2	0	0	2	19
Louisiana	3	3	1	2	3	0	2	2	0	0	2	18
Oregon	3	3	3	2	0	1	2	2	0	0	2	18
New Hampshire	3	3	3	1	3	2	0	0	0	2	0	17
Ohio	2	1	3	2	0	1	2	2	0	2	2	17
Georgia	3	3	0	0	0	1	2	2	3	0	2	16
Nebraska	3	2	1	2	3	2	2	0	1	0	0	16
Iowa	3	1	1	2	3	1	1	1	1	2	0	16
Missouri	3	0	2	0	3	2	2	2	0	0	2	16
Utah	2	3	3	2	0	0	2	2	0	0	2	16
Illinois	2	1	3	3	3	1	2	0	1	0	0	16
California Liquid*	3	3	3	2	3	0	0	0	0	0	0	14
Wisconsin	3	3	2	2	0	1	0	0	1	2	0	14
Indiana	3	3	2	1	0	1	1	0	1	1	1	14
Rhode Island	3	2	1	0	3	2	2	0	0	0	1	14
Arizona	3	1	2	3	3	2	0	0	0	0	0	14
South Carolina	3	1	1	2	3	1	0	2	1	0	0	14
Michigan	2	2	3	0	1	2	0	1	1	1	1	14
North Carolina	3	3	2	1	3	1	0	0	0	0	0	13
Alaska	3	3	3	1	1	0	0	0	0	2	0	13
Oklahoma	3	1	3	2	3	1	0	0	0	0	0	13
North Dakota	2	3	2	3	0	1	0	0	0	2	0	13
Idaho	3	3	2	0	1	1	0	1	1	0	0	12
Florida	3	1	2	2	1	1	0	1	1	0	0	12
Tennessee	3	3	1	2	2	0	0	0	0	0	0	11
California Gas*	3	1	0	2	0	1	2	1	1	0	0	11
Massachusetts	3	0	1	2	0	1	1	2	0	1	0	11
Montana	3	3	3	0	0	1	0	0	0	0	0	10
Pennsylvania	2	3	2	2	0	1	0	0	0	0	0	10
Alabama	2	3	1	2	0	1	0	0	1	0	0	10
Vermont	2	2	2	2	0	1	0	0	0	1	0	10
New Mexico	2	3	2	2	0	0	0	0	0	0	0	9
Maryland	2	2	1	2	0	1	0	0	1	0	0	9
Wyoming	2	1	2	2	0	1	0	0	1	0	0	9
New York	2	0	0	0	0	1	1	1	0	2	2	9
Kansas	3	2	1	0	0	0	1	1	0	0	0	8
Virginia	3	1	1	2	0	1	0	0	0	0	0	8
DC	0	3	2	2	0	1	0	0	0	0	0	8
New Jersey	3	0	0	0	0	1	0	0	0	0	0	4
Delaware	2	0	1	0	0	1	0	0	0	0	0	4
Hawaii	0	0	0	0	0	0	0	0	0	0	0	0



* California is the only state that has different agencies for natural gas and liquid pipelines

What's Wrong With Integrity Management?

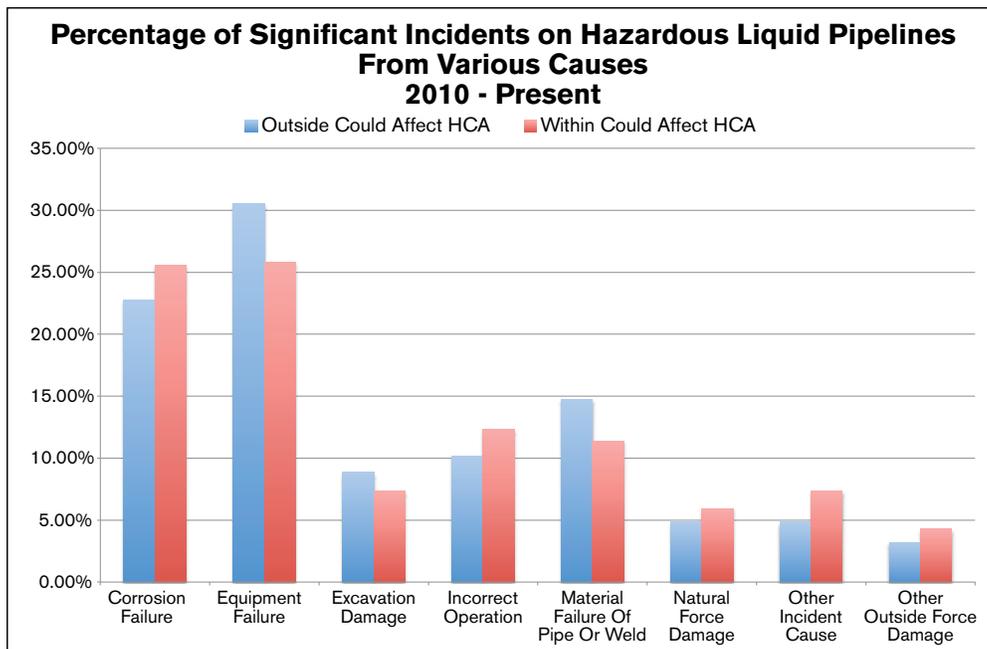
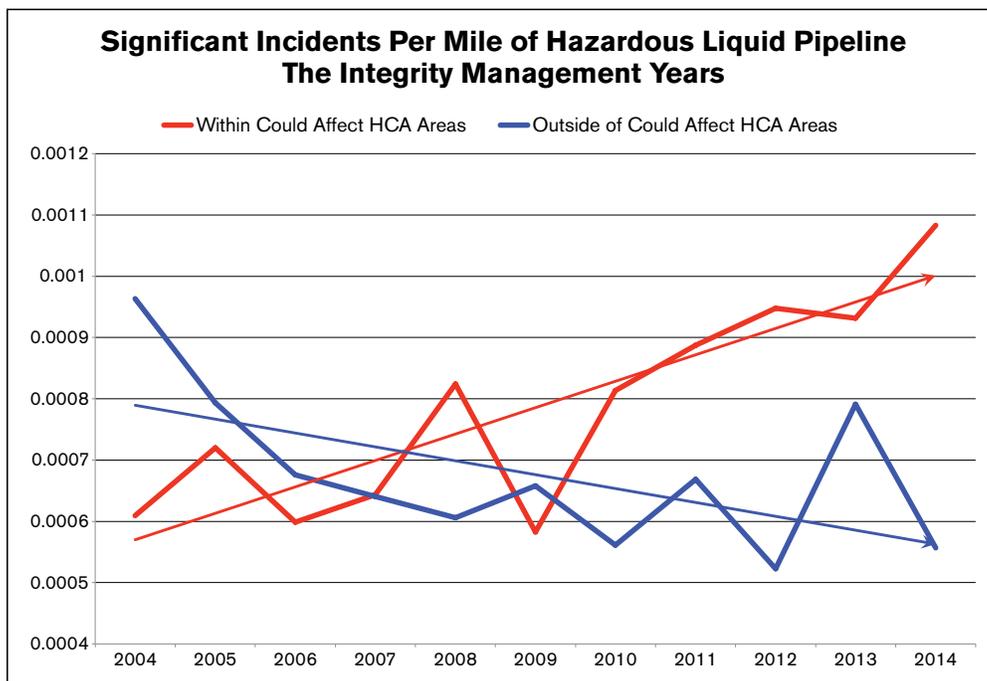
Integrity management is a relatively new program that requires pipeline operators to assess their pipelines for the risks that may be present, and then draft plans for how they intend to protect their pipelines from those risks and continually assess the pipelines to see if their plans are working. Part of the assessment includes actually physically inspecting their pipelines from time to time to see if issues such as corrosion or cracking have developed or increased, and to check for physical changes in the pipe such as dents or gouges. Most of these physical inspections are done using in-line inspection devices, often referred to as smart pigs, which travel through the interior of the pipeline and use a variety of different types of sensors to look for “anomalies.” Smart pig technology has improved greatly over the years and it is not out of the ordinary for

a smart pig to find hundreds of anomalies in a relatively short stretch of pipe, because the sensors are sensitive enough to find extremely tiny changes in the pipe. The presence of small anomalies does not necessarily mean the pipeline is flawed and needs to be repaired, but does give the operator information that they need to continue to keep an eye on each anomaly to see if it is getting larger over time to where it could be a problem in the future. As part of their integrity management plans companies will actually dig up a certain percentage or type of anomalies to confirm that what is actually on the pipe agrees with what the sensors in the smart pigs has indicated. Their integrity management plans, along with the regulations, also tell them when anomalies are at the point that they need to be repaired and how soon those repairs need to be made.

Integrity management is only required on sections of pipelines that could affect high consequence areas. For hazardous liquid pipelines that includes about 42% of all pipelines and is determined by a combination of human population density and environmentally sensitive areas near the pipeline. Those sections need to be inspected at least every five years unless a company's integrity management plan determines more frequent inspections are necessary. Only about 7% of natural gas transmission pipelines fall under integrity management requirements, which is determined solely based on human population density since leaks from natural gas pipelines do not impact environmentally sensitive areas. Those pipelines need to be inspected every seven years unless a company's integrity management plan determines more frequent inspections are necessary.

The Pipeline Safety Trust has always supported integrity management planning, because before Integrity management requirements were passed there was no requirement that a pipeline once put in the ground was ever inspected again, and that still applies to pipeline segments that fall outside of high consequence areas. We would also like to see it expanded to cover more miles of pipelines by expanding the definitions of high consequence areas to include more types of environmentally sensitive areas, and areas where people live near pipelines but not at the densities that are currently covered by the regulations (rural areas).

Continued on page 11



When passed, integrity management was touted as a way to greatly reduce the number of pipeline incidents, but like just about any new system that relies heavily on both technology and human decision making integrity management as originally implemented was not perfect and needs to be continually assessed and updated. While the theory of continual risk assessment, inspection, verification and repair make good logical sense; the actual outcomes from the first decade of the program show all is not yet quite perfect. Earlier this year the National Transportation Safety Board (NTSB) released a safety study they did on the performance of integrity management programs for natural gas transmission pipelines. That study found that while the program did help decrease the rate of incidents from time dependent causes such as corrosion, there was no evidence that integrity management had reduced the overall number of pipeline failures. The NTSB study also noted that operators were not paying enough attention to the way different risks may interact with each other, or enough attention to risks that can not be measured with smart pigs – things like ground movement, various equipment failures, and inappropriate operation of the pipeline. NTSB also noted that PHMSA’s current program and data collection makes it very difficult for an inspector to know if a pipeline company is correctly identifying risks, or to learn where the program may need to be improved based on pipeline failure data.

The Pipeline Safety Trust also wondered how well integrity management was working in regards to hazardous

liquid pipelines. Since pipeline segments that could affect high consequence areas (HCAs) are required to get more attention and testing as part of the integrity management program we would expect that the number of pipeline failures in those segments to be lower than in segments that did not get that increased attention and testing. Using the PHMSA incident and mileage data we looked at failure rates per mile of pipeline inside HCAs compared to outside HCAs, and we were quite surprised that what we found was exactly opposite of what we would have expected. Our analysis showed that the rate of failure of pipelines covered by integrity management has been steadily increasing during the integrity management years, while the failure rate for pipelines not covered by the additional layer of protection was steadily decreasing (see chart). Our analysis of the data was not in-depth enough to provide any clue to why integrity management has not lived up to its initial promise of decreasing failures, but like the NTSB study, it shows that a serious reevaluation of the integrity management program needs to be undertaken.

We have shared our analysis with the pipeline industry and with PHMSA, and we will be hosting a session at our November conference on integrity management that will include representatives from NTSB, PHMSA and the industry. PHMSA has also released a proposed rule (see article on page 7) that potentially can deal with some of the shortcomings in integrity management. Stay tuned to our newsletter and we will update you as this important pipeline safety story unfolds. ■

Pipeline Safety Indicators

For the past few years governmental entities, industry groups, and safety advocates like the Pipeline Safety Trust have all voiced the opinion that clear pipeline safety indicators based on real data be used to help tell the story of how safe pipelines in this country really are. So here is a little test for you. Below are some pipeline safety indicators, which ones do you think are accurate?

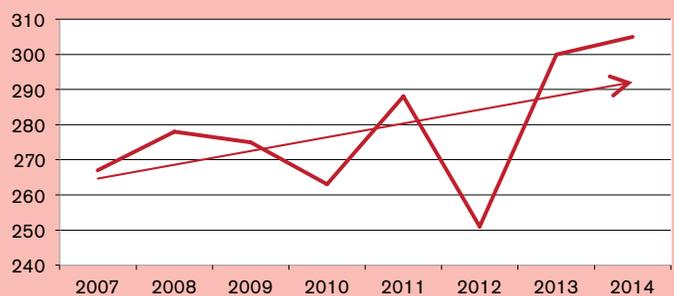
99.999% of crude oil and petroleum products are delivered safely by pipelines each year

Each year in the United States over 3.5 million gallons of crude oil and petroleum products are spilled from pipelines

Serious Incidents on All Types of Pipelines



Significant Incidents on All Types of Pipelines



The reality is that all of these indicators are based on PHMSA data, and are correct, but clearly none of them alone tell the whole story about how safe pipelines are.

The Pipeline Safety Trust has been working with PHMSA and industry for over two years now trying to come up with good “meaningful metrics.” We are now talking with the Canadian Energy Pipeline Association (CEPA) about the Trust taking on an independent effort in Canada to jumpstart some pipeline safety indicators there, which would include providing the public all the data and explanation that is needed to verify the indicators so people can trust such indicators.

We will update our progress on these efforts in a future newsletter, and if there are any data or statistics “geeks” out there that would like to provide us input in what real indicators are that tell a true story about pipeline safety please send us a note at info@pstrust.org. We are looking for some volunteers to test various indicators out on and critique the ones we come up with. ■

One Community's Efforts to Improve Pipeline Safety



The Alamo Improvement Association in Contra Costa County, California, had concerns about a Kinder Morgan pipeline that runs along a heavily-used multiuse trail through the middle of their community. Using a PHMSA Community Technical Assistance Grant (TAG) they hired the Trust to help educate the community about hazardous liquid pipelines, and review the safety of those pipelines in their county. The Trust participated in two community education forums in June, along with county staff, staff from the Office of the State Fire Marshal, and a Kinder Morgan representative. In September, Trust staff presented our final report to the county Hazardous Materials Commission, who voted to endorse the report, and work with other county agencies on implementation strategies. You can see the report, as well as the presentations given at the education forums on our website: <http://pstrust.org/trust-initiatives-programs/work-in-other-communities/alamo/>

Pipeline Safety Technical Experts – Resource Directory

The Trust has a resource directory of Pipeline Safety Technical Experts posted on our website: <http://pstrust.org/trust-initiatives-programs/pipeline-safety-technical-experts/>. The listings are the result of a request for qualifications we published early this year – thanks to all of you who gave us helpful feedback, and those who responded to the RFQ! Thanks also to PHMSA who helped make this possible through a Community Technical Assistance Grant. Please let us know if you're interested in being added to the list, or if you'd like more information on available technical assistance.

Welcome Administrator Dominguez!



Marie Therese Dominguez

We're pleased that PHMSA has a new Administrator, and welcome Marie Therese Dominguez to the job! Ms. Dominguez began serving in June 2015, and was officially confirmed in September. She previously served for over two years as the Principal Deputy Assistant Secretary of the Army (Civil Works). As Principal Deputy she provided policy direction and performance oversight for the Army Corps of Engineers Civil Works

programs focused on water resources conservation and development, navigation, flood control, hydroelectric power generation and outdoor recreation.

Ms. Dominguez has her work cut out for her as the head of PHMSA, whose responsibilities include the development and enforcement of regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6 million miles of the gas and liquid pipeline transportation system and the nearly 1 million daily shipments of hazardous materials by land, sea, and air.

From 2007-2013, she held a senior position for the United States Postal Service. Earlier in her career, she directed a consulting team at Resource Consultants, Inc., and previously served in a number of positions, including at the U.S. Department of Transportation's Federal Aviation Administration, the National Transportation Safety Board, and as Special Assistant to the President and Associate Director of Presidential Personnel at the White House.

Ms. Dominguez is a graduate of Smith College in Massachusetts and holds a Juris Doctorate from Villanova Law School in Pennsylvania.

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