

Damage Prevention Event Report Analysis

Pipeline DPR Workshop #6
December 11, 2024

 Canada



Topics

- DP Regulations(DPR) Event and Damage to Pipe (DTP) Overview
- Preventive Action Analysis
- Cause Analysis
- Public Awareness
- Damage Prevention Quarterly data

The presentation today will begin with a some basic comments on data quality and CER intentions when collecting DPR reports after which I will describe some more general and targeted analysis that I have completed with respect to:

General DPR reporting rates

Preventive causes in General

Causes related to Damage to Pipe Events

Data around Public Awareness efforts

Data Quality

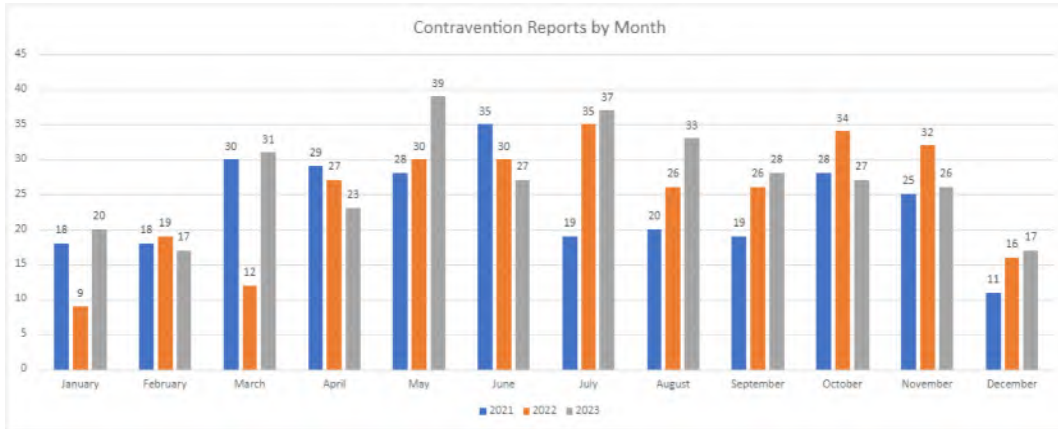
Observations by CER Inspectors



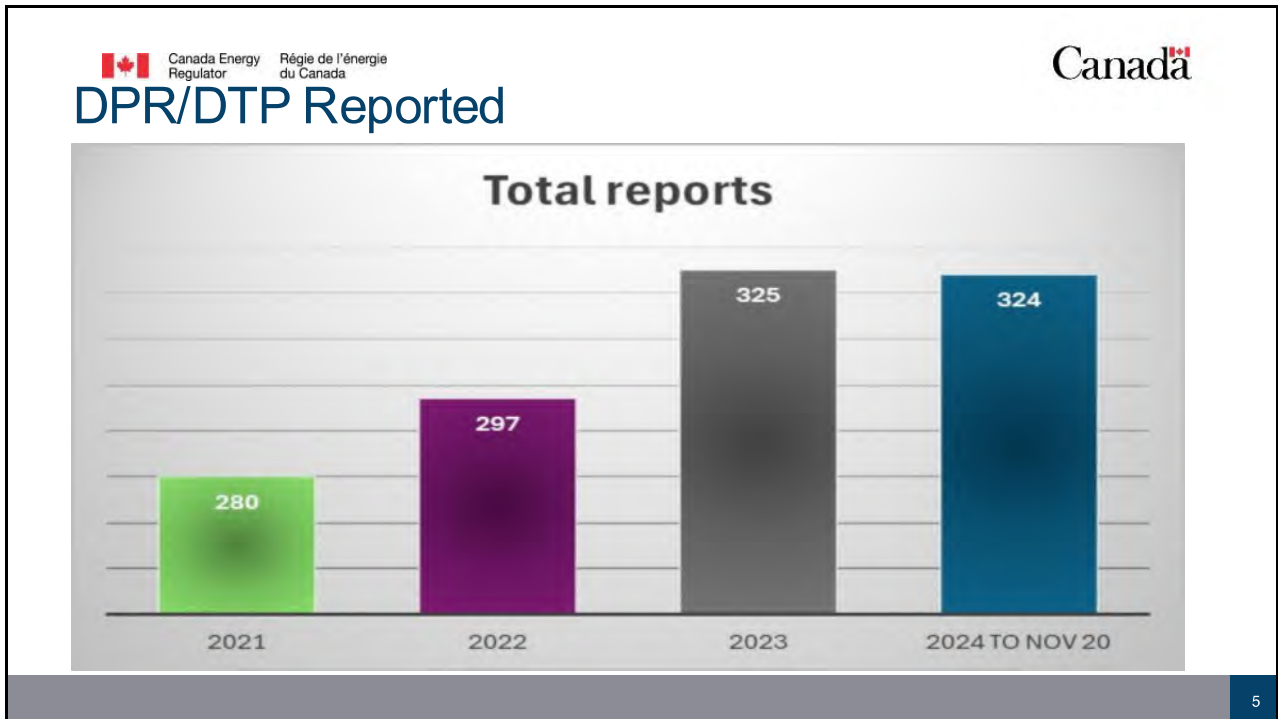
The CER Damage Prevention team analyzes DPR Reporting Data to focus our activities through the identification of themes and trends.

Learning from DPR contraventions/unauthorized activities (near-hits) is important as they are a leading indicator for activities that can cause damage, stakeholder groups that require more education and regions where the activities are spiking.

General DPR/DTP Overview

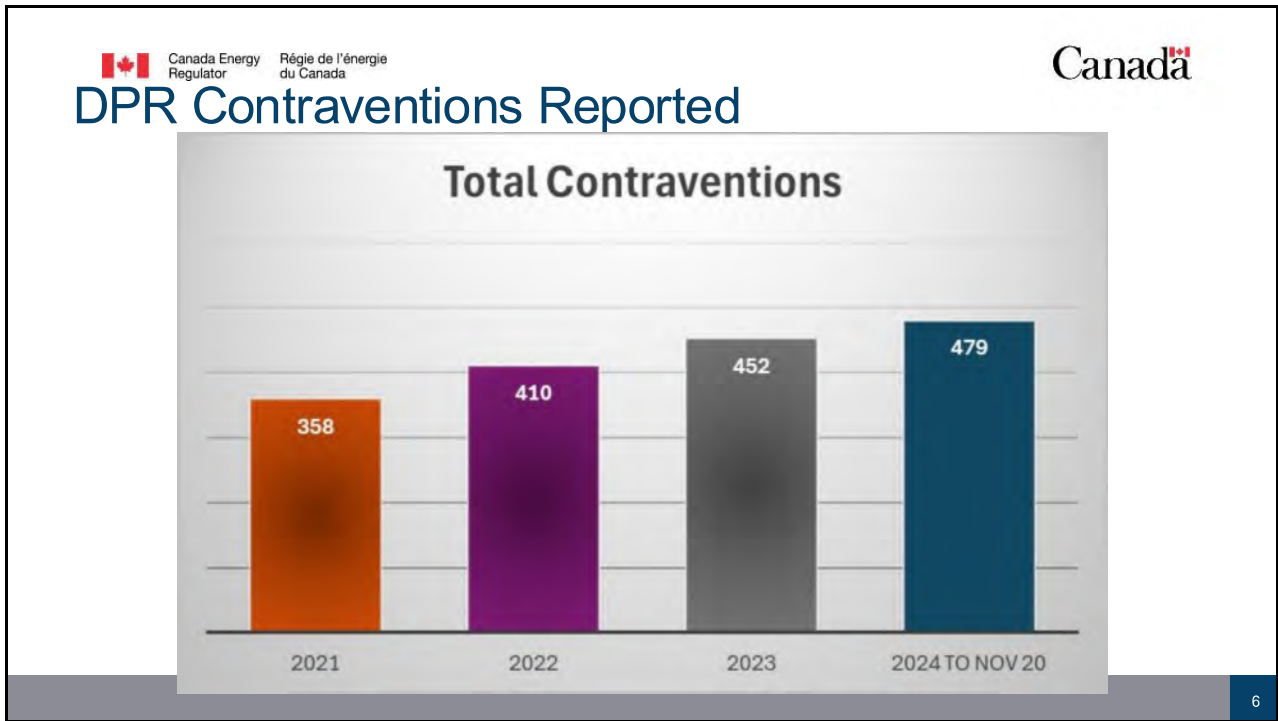


There are seasonal peaks in ground disturbance activities throughout the spring, summer and tailing off in fall after a flurry of activity at the end of construction season. As the joke goes; there are only two seasons in Canada – Winter and Construction. December, January and February are typically lower in reported activities, and this is evidenced when cross-referring the number of contraventions with the number of locate requests made to One-call centres. The peaks and valleys in activity are nearly identical.



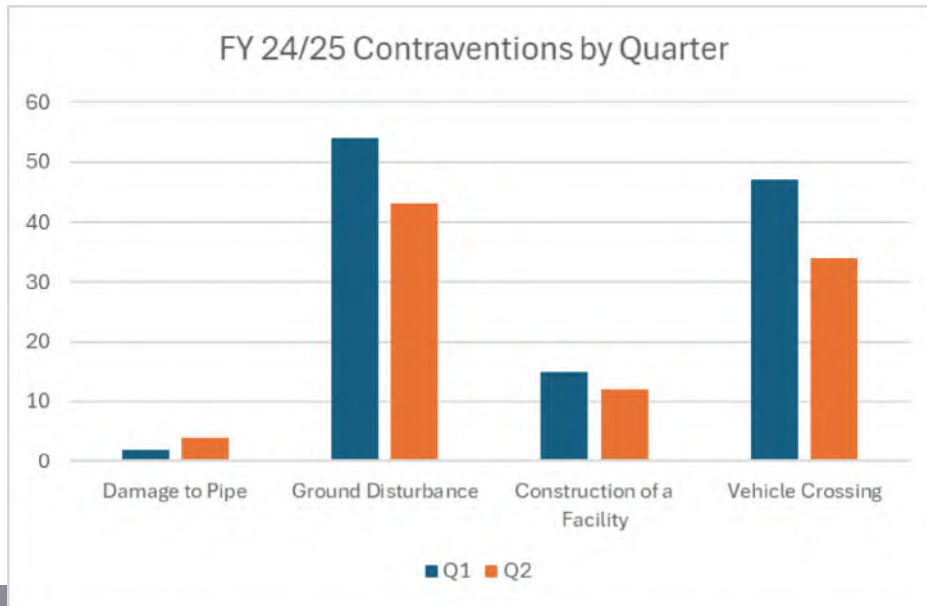
Here we see the total events reported year over year

Total event reports are increasing with 2024 topping 324 to just November 20th total reports. We are trending up in report numbers but remember – that's not a bad thing. It is better reporting, not necessarily more contraventions. Companies know what to look for and are reporting. It would be easy to say that we want to see the numbers dropping – you get what you ask for and they stop reporting....we don't learn from the near hits...



Here we see the total contraventions reported year over year

Here we see that we are already surpassing last years' contraventions - reporting is getting better, more accurate at capturing all of the contraventions.

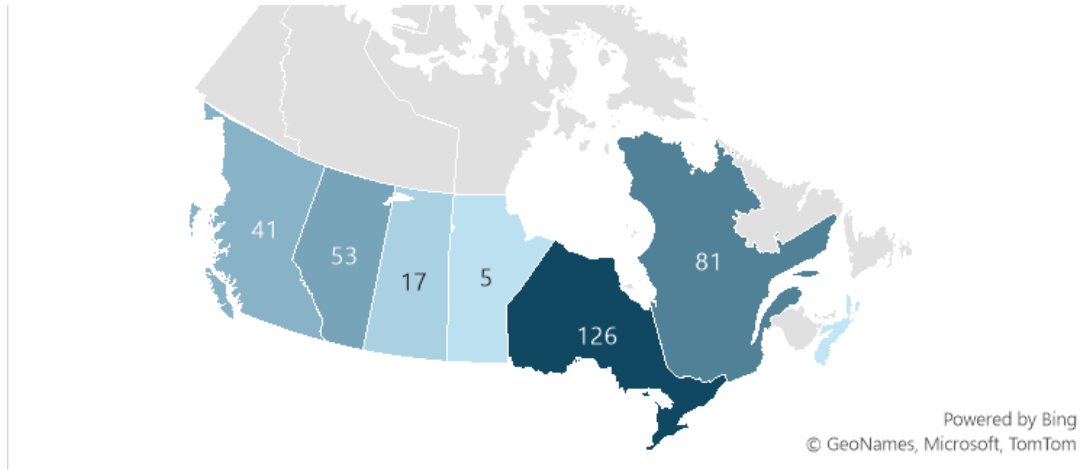


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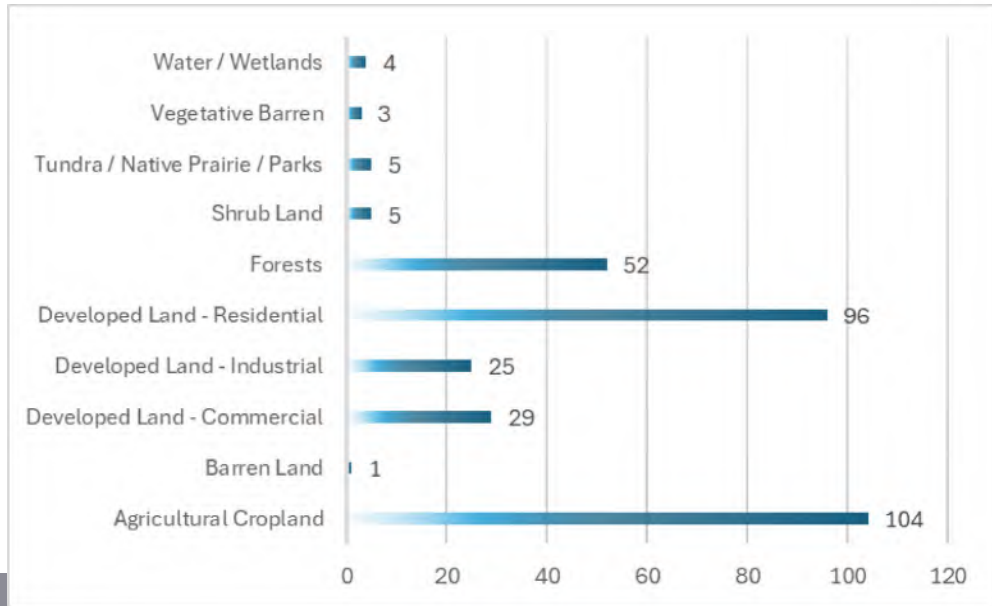
FY 24/25	Q1	Q2	Q3	Q4	Totals	
Number of Reports	68	51			119	
Number of Contraventions						
Damage to Pipe	2	4			6	3%
Ground Disturbance	54	43			97	46%
Construction of a Facility	15	12			27	13%
Vehicle Crossing	47	34			81	38%
Totals	118	93	0	0	211	

Contravention reports by province 2024 to Nov 20th





Land Use



Land use is looking almost exactly the same as last year.

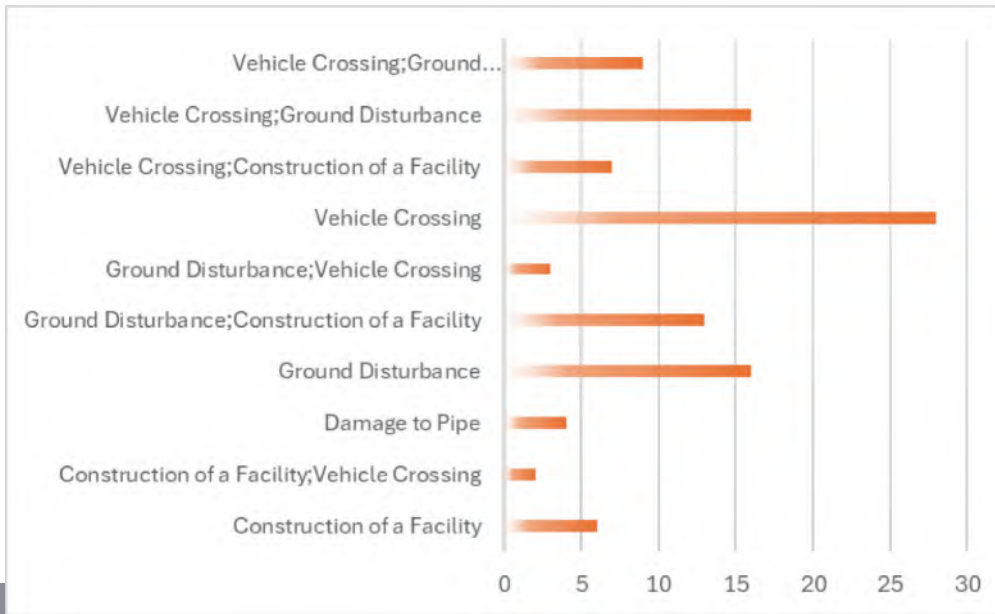


Canada Energy
Regulator

Régie de l'énergie
du Canada

Land Use Ag Cropland

Canada



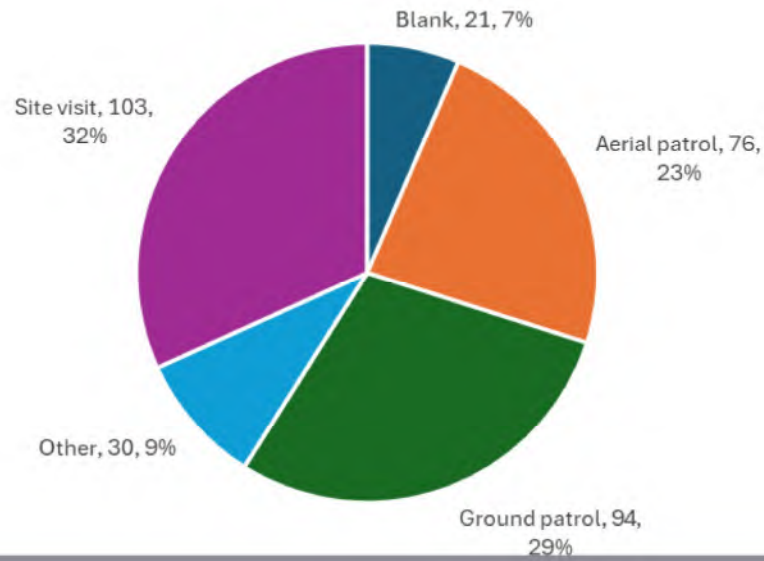
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Interesting that Agricultural cropland is where we see the highest number of reports; ag vehicle crossings is the only exemption in the regs.

The big concern is the DTPs – a damage on cropland is what prompted the crossing regulations back in 1986 when a drain tiling contractor was killed hitting a high-pressure gas line. This land use is where half of the DTPs are happening. Are companies paying attention to DOC? To the activities on the land?

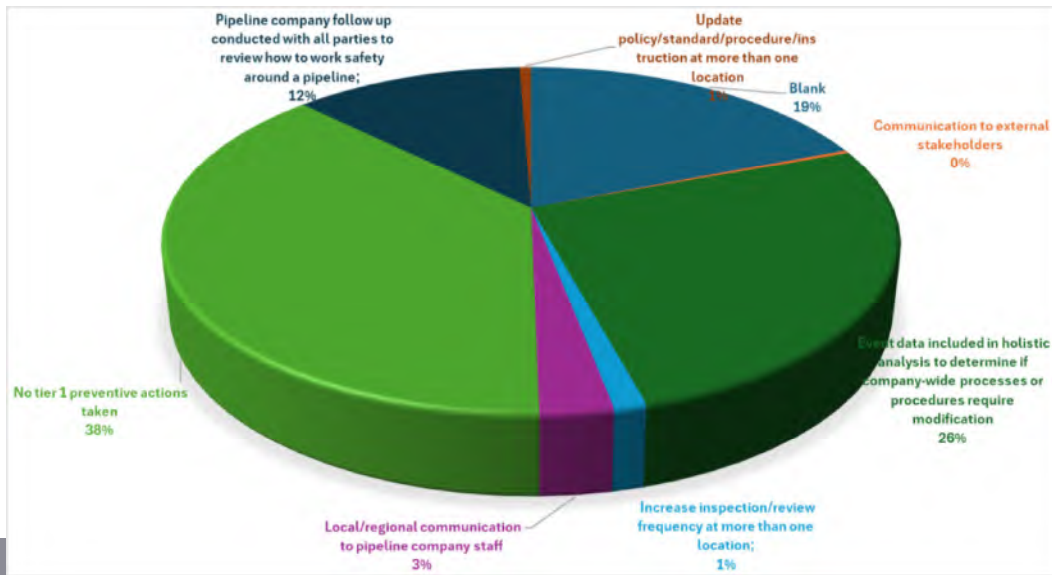
Even if a number of those are historical damages, you have to be asking questions about how it happened and how it can be prevented. These aren't even near-hits, they're hits – we absolutely have to learn from these events.

Discovery Method



Other is usually things like reported by another pipeline in the same ROW, or someone else called it in. Interesting that site visits and ground patrol

Tier 1 Preventive Actions 2024

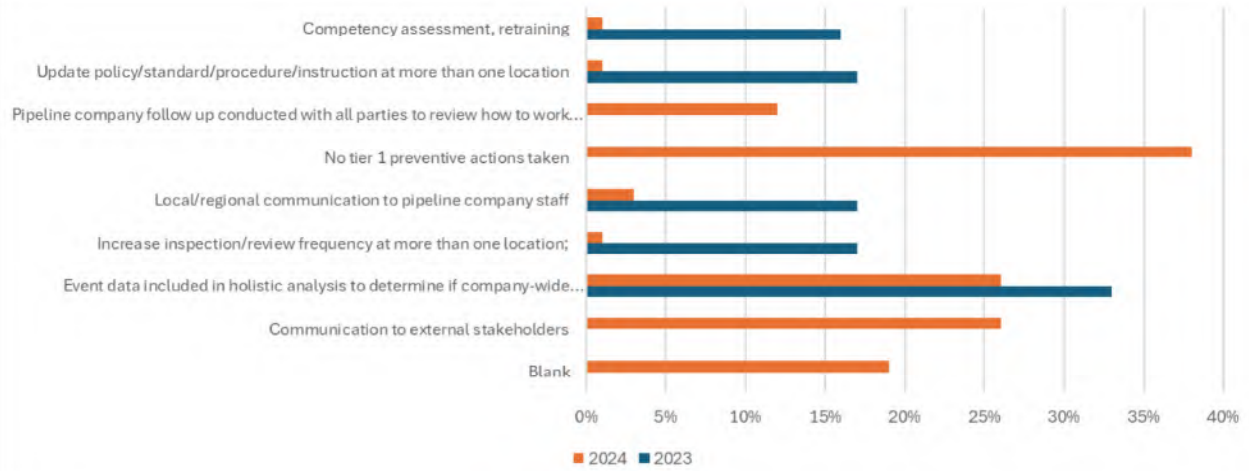


This is for 2023 - 52% of events resulted in a tier 1 preventive action: include the event data in holistic analysis to determine if company-wide processes or procedures require modification is the most frequently selected.

In the last report that looked at 2021– 23 , this was selected 62% of the time, in 2023 alone, it was 33%. I'm actually happy to see that there are other actions being selected.

One could argue that simply included the event data in an analysis is not, in itself, a preventive action. It's the implementation of learning that is a result of holistic analysis that we are really interested in. Companies should be conducting this analysis as per OPR section 6.5(1) c and s. If anyone in the audience want to share a system improvement that has arisen from holistic data analysis, I'm sure the entire group would benefit from hearing examples of continuous improvement efforts.

Comparison of 2023 to 2024 Tier 1 Actions



Tier 2 Preventive Actions

Blank	63
Modify and implement company-wide/system-wide processes or procedures for awareness/communication of key information	1
Modify and implement company-wide/system-wide processes or procedures for awareness/communication of key information; Modify and implement company-wide/system-wide processes or procedures for hazard identification or risk assessment; Staff or internal communication across company/system	1
No tier 2 preventive actions taken	257
No tier 2 preventive actions taken; Staff or internal communication across company/system	1
Staff or internal communication across company/system	1
Total	324

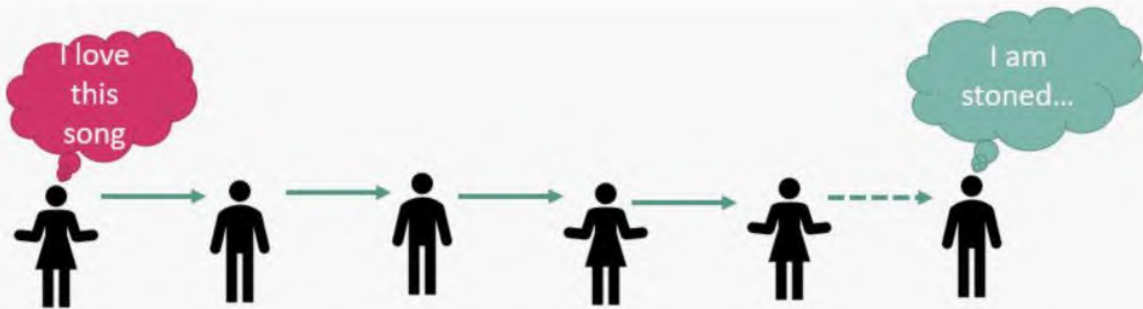
99% of events do not identify tier 2 preventive actions – that is up from the 97% average for the past 3 years.

It is understood that not all DPR events are created equal and that each company may handle events differently. It is required however that the methodology to addressing these events is logical and systematic. The CER requires Detailed event reports that include basic cause, corrective action at minimum. We do expect that, preventive actions are taken to improve the company's managements system when warranted.

Companies should be prepared to describe and defend their internal classification system of Damage Prevention Regulation Events and how the system triggers a response, including the assembly of investigative teams to conduct fulsome root cause analysis and investigations when required. In future workshops it would be great if any of our companies were willing to share their risk matrices, classification systems and investigation standards as they relate to DPR events.

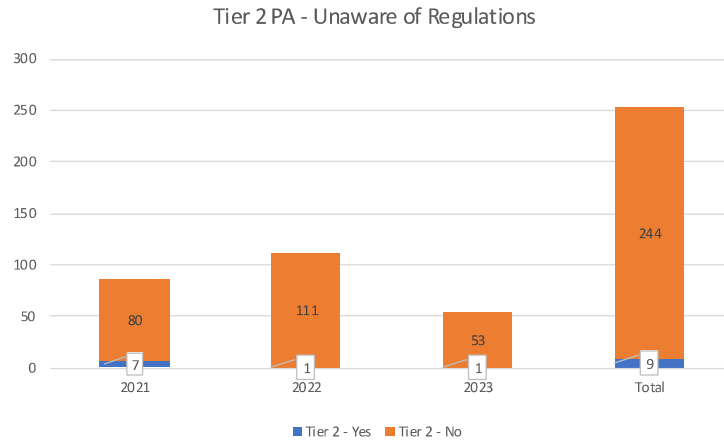
UA Basic Cause: Inadequate Communication

Nearly 20% of reports cite inadequate communication as a basic cause



So far in 2024 nearly 20% of reports had inadequate communication as the primary basic cause. We need to look at how we can better communicate the safety information to the people exposed to the hazard.

Unaware of/Misperceived Regulations– Tier 2 Preventive Actions



And The rates at which companies are identifying tier 2 preventive actions are almost nil.

We are hoping that all of the holistic analysis that is occurring is leading to meaningful continuous improvement opportunities.



So I hope the slides have given you something to think about they will be available for distribution so that you can take a closer look.

If there is something in the data that can support your efforts and initiatives then that's great.

We will continue to analyze the reports we receive as this information does inform our strategic plan.

I'll end on the same note I began with.

The integrity of the data is key. Quality reports will result in quality analysis and meaningful learning.