

Leak detection is a vital consideration for running a pipeline safely, though regulation compliance is not always an easy aspect of pipeline integrity management (PIM) to navigate. The regulations are unique for each country and in the US, compliance requirements may differ even from state to state.

The challenges surrounding audits have been further complicated in recent years by the COVID-19 pandemic. With the emergence of virtual audits or information requests, posing risks to the audit due to difficulties in communication and information interpretation without the face to face discussions.

Here we'll cover the essential considerations of a pipeline leak detection regulation audit. We'll explore:

- The purpose of an audit.
- Having the right documentation.
- Preparation and human considerations.
- Why the stakes are so high.
- How the right pipeline compliance service partner can help.

Preparing for an audit can be daunting for pipeline operators, considering these areas regularly will help embed compliance into your organisation's culture, as required to meet the regulations.

The purpose of an audit

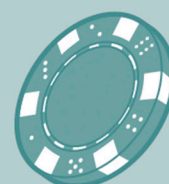
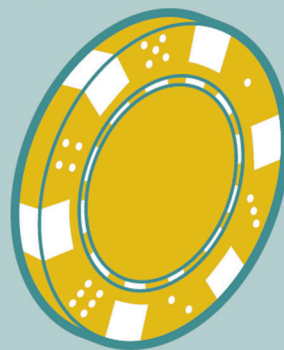
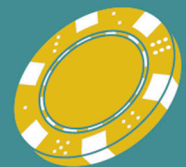
Audits are designed to assess a company's compliance with legal and regulatory requirements. Pipeline leak detection audits help to ensure that pipeline operators are compliant with the stringent safety requirements of liquid and gas pipelines.

The requirements help to protect people and the environment from the potential damage caused by pipeline leaks and ensure that the right systems and processes are in place.

Audits often consist of three stages:

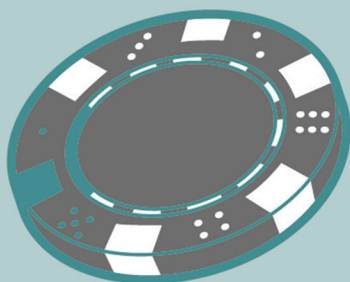
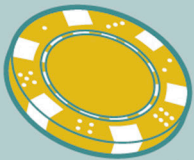
- Pre-site visit activities.
- Onsite activities.
- Post-site activities.

These stages require pipeline operators to gather the right information, complete documentation (such as audit checklists) and where required, provide additional information at the auditor's request.



DON'T GAMBLE WITH YOUR AUDIT

Carin Meyer, Regulation Compliance Programme Specialist, Atmos International, USA, talks through a holistic view of what pipeline operators need to consider for passing a pipeline leak detection audit.



At the end of the process the pipeline operator will receive an audit report, which will detail any findings.

Having the right documentation

Reviewing documentation is a big aspect of preparing for an audit. It ensures that pipeline operators have the correct standard operating procedures (SOPs) in place and can also provide an audit trail of processes. Therefore, it helps to demonstrate compliance with pipeline safety regulations.

The procedures and training or testing documents required may be used for multiple regulations. So, it's vital to ensure they are kept current and comply with each individual regulation that needs to be met.

One of the biggest challenges pipeline operators can face is that regulated versions incorporated in the law of a country or state, may not be the latest version approved by the regulatory body. We've seen clients fall into this trap with updated American Petroleum Institute (API) documents being released but not yet incorporated into regulations. It's important to distinguish which version is required by law and what is required by the regulator.

When preparing for an audit, both industry standards and best practice should be reviewed. It is vital to reference the governing documentation and official documents from regulators to ensure you align.

In the US, the federal regulations are applicable to every state to ensure the protection of people, public and the environment. Some US states have adopted additional regulations or requirements, which makes it important to review both federal and state regulations that impact your organisation.

It is important to review documents closely to ensure they are signed and dated if required. This is seemingly obvious but has been a pitfall for some pipeline operators. Not doing so could result in a potential finding and prolong the audit, causing the auditor to comb deeper through your SOPs.

Another vital consideration is, if it's written in the documentation, you must do it. For example, if the SOP states that the controller will shut down the pipeline after getting a leak alarm from the leak detection system (LDS), then this is what they must do. If the controller determines that it was in fact a false alarm and doesn't shut down the pipeline, they are in fact in violation of the SOP, resulting in a potential finding.

Well-thought-out procedures need to consider all angles and aren't as straight forward to write as they might seem. It can therefore be useful to have someone external to your organisation to review important documentation.

Documentation such as an operating manual should be created to govern procedures and then followed by supporting documentation that demonstrates consistent compliance with procedures. The need for this is heightened when regulations change, we know this is expected in the US for API RP 1130, API RP 1175 and the new Gas Mega Rule this year. Carrying out internal audits will help ensure that team members are aware of the correct SOPs and demonstrate consistent compliance with the procedures.

Preparation and human considerations

Preparing for an audit is made even more challenging when you consider the COVID-19 pandemic. During its height, many pipeline leak detection compliance audits were completed virtually with no face-to-face time at all.

Although virtual audits can help overcome logistical and cost constraints, they can be troublesome due to the fact that:

- It's hard to build a rapport with the auditor.
- Information and documentation requests can be easily misinterpreted.
- Technology can be a barrier to clear communication.

Though some audits are going back to being face-to-face depending on the regulatory body, for some, virtual audits will become the new normal.

There have also been headcount changes in regulatory bodies, due to the pandemic and the increased demand in the industry. Pipeline safety personnel that complete audits are typically from an engineering background. The high demand for these skills means that auditors are notoriously difficult to recruit and retain. The Pipeline and Hazardous Materials Safety Administration (PHMSA) in the US announced that they would continue to implement hiring initiatives. Audits can be performed by PHMSA or state designated local authorities. In California, for example, the auditors are part of the fire marshal's office and they have been able to increase their staffing's. Headcount changes like this in turn means that pipeline operators are faced with new auditors on a regular basis. This poses several challenges, such as the auditor being unfamiliar with the pipeline operator or systems used.

With all these factors considered, it is vital to ensure you only have one point of contact who handles the audit. Having a large number of people involved throughout, only muddies the water. Bringing in additional people only when they can add value will help the audit to remain on focus and avoid miscommunications.

It is recommended to only provide the specific information that's being requested as part of the audit. Providing too much information can do you a disservice. It is important for you to review the documentation several times to ensure you are providing what's being asked. If you're unsure, ask for clarification on what is required rather than sending unnecessary pieces of information.

Why the stakes are so high

Not passing an audit can carry some significant (ever-increasing) financial repercussions for pipeline operators, plus the reputational damage inflicted on the organisation.

In the US, if the pipeline regulator perceives that violations exist, a report is used to calculate risk-based penalties. These are civil penalties and the amount is dependent on the severity of the violation. For audit considerations that cover records, activities and equipment or facilities, for example, the penalty could range from US\$1728 up to US\$8640 just for this one section of the audit.

Pipelines in Canada are regulated based on jurisdiction. The Canada Energy Regulator (CER) is an independent agency created by the Canadian government in 1959. The CER regulate all pipelines that cross inter-provincial or international boundaries. Pipelines that are only within one province are regulated by that individual province. Pipeline operators can be prosecuted for certain violations of the Canadian Energy Regulator Act. They can range from US\$100 000 to US\$1 million and could carry prison sentences of up to five years. There's also a risk of getting caught out by Administrative Money Penalties, these can apply to individuals or companies for infractions and the fines range from US\$25 000 to US\$100 000 per day per violation.

The Pipelines Safety Regulations (PSR) 1996 is one of the regulations that pipeline operators need to adhere to in the UK. Audits, usually carried out by the designated local authority span various aspect of the pipeline operations and its construction. Breaches to the regulations can result in fines of over £100 000, dependent on the non-compliance.

It's safe to say, the stakes are high. This places a lot of pressure on the controller who oversees the audit.


How the right partner can help

Audits can be daunting, but they can be made less so with the right preparation. It is the responsibility of the pipeline operator to demonstrate compliance, through significant documentation, SOPs and training processes.

We've already talked about having one point of contact for the audit, but it is also crucial to create a culture of safety

throughout the business. This means regularly reviewing documentation, training new and existing employees, reviewing SOPs against best practice and regulations and internal audits.

Having an external partner can help demonstrate compliance with regulations by providing unbiased feedback, unless there is someone within the organisation dedicated to compliance. In most oil and gas companies the employees are fully occupied to perform their day-to-day duties, so adding audits to their list will increase their workload and cause stress. An external partner will therefore help to take the pressure off the pipeline operator who oversees the audit and avoids the loss of knowledge that occurs when people leave the organisation.

External partners can help manage the audit process, reduce stress and influence further employee collaboration. It also gives the opportunity to ask the right questions to an auditor so that the desired outcomes are achieved from the audit. The return on investment can be very high if it means efficient programme improvement. 

References

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