

Successful Industry Led Safety Alerts

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UK Petroleum Industry Association – Who are we?



UKPIA is a trade association representing the interests of, and speaking for, the nine refining companies involved in UK downstream oil industry

UKPIA's representation focuses on refining, storage, distribution, and marketing of petroleum products in non-competitive areas.

Developing a methodology

- Sharing has always happened...
 - *informally, at committee meetings*
 - *typically no formal documentation*
- However, as part of UKPIA's Commitment to Process Safety, we recognised that...
 - *we needed to develop and implement an effective process for sharing of and learning lessons from relevant, high potential process safety incidents*
 - *many lessons from outside of our sector have applicability to refining and terminal operations*

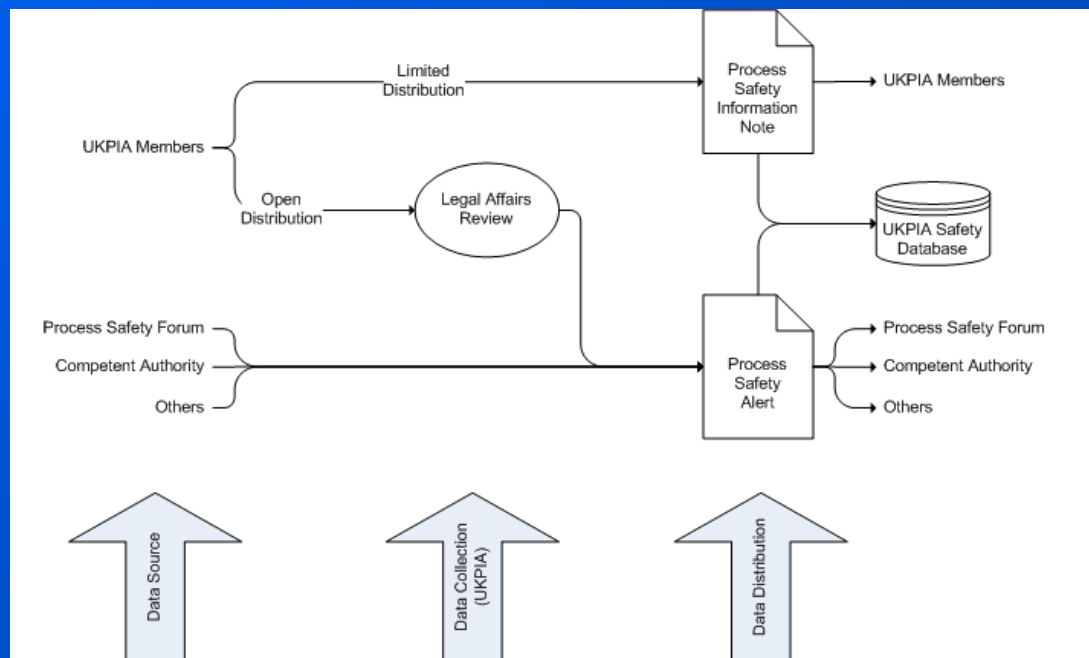
Developing a methodology

- To meet these challenges, UKPIA
 - *Developed a formal process ‘Guideline for the exchange of high level learnings’*
 - *Recognised the importance of the Process Safety Forum in sharing with other industry sectors (the Process Safety Forum consists of representatives from UKPIA, TSA, CIA, OGUK and NIA)*

We are still in the early stages, and are still learning how this formal process should best be applied.

Developing a methodology

- **Guideline for the exchange of high level learnings**
 - **Defines the process for sharing,**
 - source of information
 - distribution
 - data collation – storing for future analysis
 - two tier system to address legal constraints



Developing a methodology

- **The ‘two tier’ approach**
 - **Recognising the legal constraints of sharing information that may be commercially or legally sensitive**
 - Open Distribution - Process Safety Alerts for distribution through, and on behalf of, the Process Safety Forum
 - Limited Distribution - Process Safety Information Notes for limited distribution by, and within UKPIA only
 - **Limited distribution ensuring early reporting of issues**
 - **Transition from Limited Distribution to Open Distribution (if still relevant) when legal issues have been addressed**

Process Safety Alert

<h2>Process Safety Forum</h2> <p>The Process Safety Forum consists of representatives from UKPIA, TSA, CIA, OGUK and NIA</p>	
<h3>Process Safety Alert 001</h3>	
Issued on: 25 th August 2009	Issued by: Process Safety Forum
Subject: Valve Seal Compatibility with Gasoline/5% Ethanol Mix (E5) on Fuel Loading Racks at Terminals	
Issue	<p>Two recent incidents on fuel loading racks at terminals have resulted in the loss of containment of product (E5).</p> <p>Loss of product was due to the failure of the Flow Control Valve (FCV) to close completely once the target volume had been reached. Note in both incidents, the FCV acted as both the metering valve and the automated shutoff valve.</p> <p>In one instance it was seen that the 'O' ring seals used on the FCV had failed, in the second case, an 'O' ring seal on the Normally Open solenoid (which closes the FCV) had failed.</p> <p>At least one of the incidents was probably caused by product attack on the 'O' ring.</p>
Learning	<p>The Management of Change process prior to the changeover did not adequately identify the risk of product attack from the new material and the need for ongoing inspection to confirm any assumptions made.</p> <p>Verify the suitability of the 'O' ring seals used in both FCV and associated solenoid valves for compatibility with E5. This review should be done in consultation with the valve and seal manufacturers.</p> <p>As part of ongoing maintenance procedures, ensure that 'O' ring seals are inspected for signs of product attack.</p> <p>Other non-metallic components of the system should also be examined for compatibility with E5.</p>

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Further Consideration	Where the FCV is used as both the metering valve, and the automated shutoff valve, consideration should be given to performing a risk assessment to determine if independent automated shutoff valves are required.
Distribution: UK Petroleum Industry Association Tank Storage Association Process Safety Forum CONCAWE API	

Process Safety Alert – Follow up actions

- **Following the issue of a Process Safety Alert**
 - **When warranted, are discussed in the appropriate UKPIA committees to determine if any further analysis or action is required**
 - Prioritisation of UKPIA's Self Assessment Modules
 - Identification of the requirement for further guidance (through for example CDOIF or the Energy Institute)
 - **Data Collation**
 - Process Safety Alert entered into UKPIA's Process Safety Database, facilitating future analysis of trends
 - Database includes not only Process Safety Alerts, but also Process Safety Information Notes and potentially API RP 754 Tier 1 and Tier 2 Process Safety Events



Process Safety Alert – Follow up actions

Process Safety Alert

Process Safety Alert

Overview Process Safety Alert Number: **1**

Originator: Country: Industry: Incident Date:

Summary:

Mode: Equipment Type:

API RP 754 Tier 1/Tier 2 Data (Complete as appropriate)

Tier: Material Class: Quantity Lost (Kg):

Consequence Tier 1:

Consequence Tier 2:

Root Cause

Root Cause:

Contributing Root Cause:

Distribution

Safety Alert Issue Date: Distribution:

Record Navigation:

Create/Delete Record:

Process Safety Alerts – Measuring Success

- Measuring Success is not through the quantity of Safety Alerts Issued!
- A true measurement of success is how the Safety Alert has been received – has it genuinely raised awareness of a new high potential learning?
- Longer term, a reduction in similar incidents may also be an indicator of success

Final thoughts and lessons learned

- Be aware of the sensitivities of sharing some information – understand the legal complexities and develop a process which addresses these
- Limit sharing to only those high level learning's that are considered to be of the most benefit, avoid information overload!
- Track and maintain a record of information shared – analysis of trends provides a very powerful tool in reducing the potential for incidents