



10 FUNDAMENTALS FOR EFFECTIVE PROCESS SAFETY

INTEGRITY SAVES LIVES!

INFORM
onscreen group presentation

for explanation and discussion

to be used for
INFORM
CAMPAIGN
kick-off session

Why this campaign?

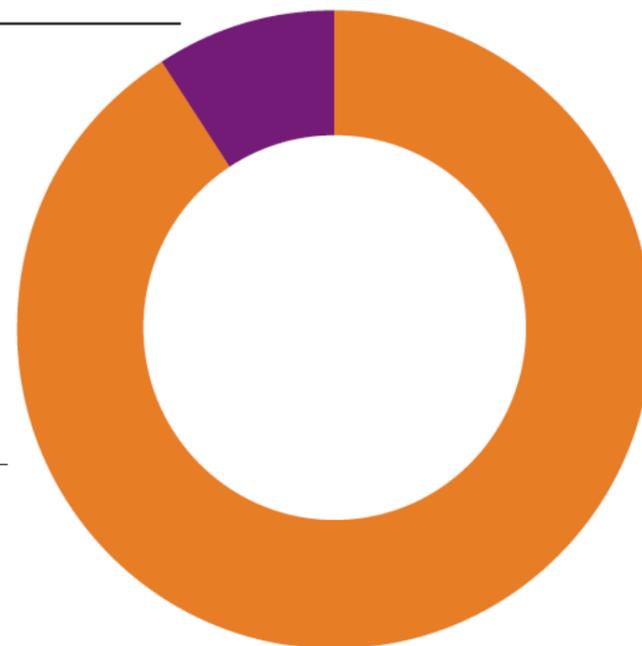
128 PEOPLE LOST THEIR LIVES in 56 process safety events over a period of ten years.*

Not linked to one of the 10 PSFs:

9%

Incident linked to one of the 10 PSFs:

91%



The campaign is intended to create awareness for **managing the integrity of operating systems and processes** that handle hazardous substances in order to prevent unplanned releases which could result in a major incident.

*Data reported by International Association of Oil & Gas Producers (IOGP), published 10/2020.



Why this campaign?

Preventing unplanned releases starts with discussing **fundamentals** for effective process safety. They are a factor in incidents. They emphasise existing good working practices to reduce unsafe actions and conditions. And they determine our daily actions, so that process safety incidents are prevented.

The fundamentals for effective process safety aim to enable front-line workers to raise concerns openly and transparently. It may not always be possible to follow a particular process safety fundamental, but **the front-line is empowered to raise issues and dilemmas**, helping to ensure effective process safety management, including potential engineering modifications to address the issues raised.



Introduction

The '**10 fundamentals for effective process safety – Integrity saves lives!**' campaign of HSElife NL focuses on avoiding unplanned releases. This onscreen presentation is meant for a group discussion.

Today we'll go through the 10 fundamentals for effective process safety. We want you to use this in order to see **if there is room for improvement on the installation**. We also want to discuss if or which decisions from safety leaders **could lead to unsafe situations**. Use the **handout** to write down your suggestions and tips.

By working well together with your colleagues and supervisor, incidents can be avoided.
TEAMWORK is essential!



1 Respect hazards

- Improve your understanding of process safety hazards at our location and your role in controlling them.
- Be vigilant about the potential impacts of uncontrolled process safety hazards.
- Discuss process safety hazards before starting a task.
- Bring forward process safety hazards to be included in activity risk assessments.



2 Apply procedures

- Use operating and maintenance procedures, even if you are familiar with the task.
- Discuss the key steps within a critical procedure before starting it.
- Pause before key steps and check readiness to progress.
- Stop, inform supervision and avoid workarounds if procedures are missing, unclear, unsafe, or cannot be followed.
- Take time to become familiar with, and practice, emergency procedures.



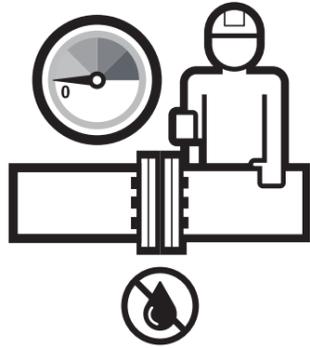
3 Sustain barriers

- Discuss the purpose of hardware and human barriers at our location.
- Evaluate how your tasks could impact process safety barriers.
- Speak up when barriers don't feel adequate.
- Perform your role in maintaining barrier health and alert supervision to your concerns.
- Use an approval process for operations with degraded barriers.



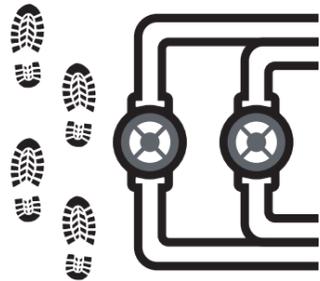
4 Stay within operating limits

- Discuss and use the approved operating limits for our location.
- Escalate where you cannot work within operating limits.
- Alert supervision if an alarm response action is unclear or the time to respond is inadequate.
- Obtain formal approval before changing operating limits.
- Confirm that potential for overpressure from temporary pressure sources has been addressed.



5 Maintain safe isolation

- Use isolation plans for the specific task, based on up-to-date information.
- Raise isolation concerns before the task starts and challenge when isolation plans cannot be executed.
- Check for residual pressure or process material before breaking containment.
- Monitor the integrity of isolations regularly and stop to reassess when change could affect an isolation integrity.
- Confirm leak-tightness before, during, and after reinstating equipment.



6 Walk the line

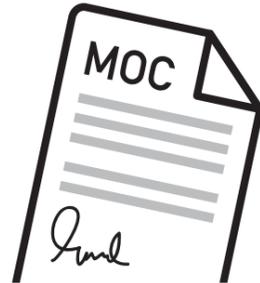
- Use up-to-date documentation that accurately reflect installed systems and equipment.
- Physically confirm the system is ready for the intended activity (e.g., valve positions, line up of relief devices, etc.).
- Alert supervision to identified documentation and readiness issues before operation.



7

Control ignition sources

- Identify, eliminate, or control the full range of potential ignition sources during task risk assessments and during job preparation and execution.
- Minimise and challenge ignition sources even in “non-hazardous” areas.
- Eliminate ignition sources during breaking containment and start-up and shutdown operations.



8 Recognise change

- Look for and speak up about change.
- Discuss changes and involve others to identify the need for management of change (MOC).
- Review the MOC process for guidance on what triggers an MOC.
- Discuss and seek advice on change that occurs gradually over time.



9 Stop if the unexpected occurs

- Discuss the work plan and what signals would tell you it is proceeding as expected.
- Pause and ask questions when signals and conditions are not as expected.
- Stop and alert supervision if the activity is not proceeding as expected.



10 Watch for weak signals

- Proactively look for indicators or signals that suggest future problems.
- Speak up about potential issues even if you are not sure they are important.
- Persistently explore the causes of changing indicators or unusual situations.