ISSUE 14 | 2 December 2014

شركة تنمية نفط عمان
Petroleum Development Oman

HSE NEWS

WORKING FOR YOU TO KEEP YOU SAFE

Latest HSE Statistics YTD	2013	2014
Workplace fatalities		
Non-work related fatalities		
Non-accidental deaths (NADs)		
Lost Time Injuries (LTIs)		
All injuries (excluding first aid cases)		
Motor Vehicle Incidents (MVIs)		
Roll over - MVIs		
Serious MVIs		
Lost Time Injury Frequency (LTIF)		

Life Saving Rules Violations YTD	
Journey management	
Speeding/GSM	
Seatbelts	
Overriding safety device	
Working at heights	
Permit	
Confined space	
Lock out tag out	
Drugs and alcohol	
Gas testing	
Smoking	
Suspended Load	

Vehicle Class A/B Defect YTD	
Class A	
Class B	

HSE TIP

Acting safely means we work in accordance with procedures at all times. Together, we can create a safe work environment.

Share it with a friend

Important News

Process safety hazards in an oil and gas facility can result in major incidents releasing hazardous materials, fires and even devastating explosions. Their effects can be catastrophic involving multiple injuries/fatalities and substantial economic, property, and environmental damage. These incidents also can affect members of the general public living nearby as well as PDO workers inside the asset.

Process safety management is about preventing these incidents by keeping these hazardous materials in pipes, vessels and equipment which have been designed and maintained to handle them safely. It is about preventing leaks, spills, equipment malfunctions, over-pressures, excessive temperatures, corrosion, metal fatigue, and other conditions. It focuses on the design and engineering of facilities, hazard assessments, management of change, inspection, testing, and maintenance of equipment, alarms management, effective control, procedures, training personnel, and human factors.

Preventing process incidents requires vigilance from everyone. PDO has suffered 18 serious process incidents so far this year which is a sure sign that more vigilance is needed. Sometimes, with the passage of time, complacency creeps in and personnel lose their appreciation of how multi-layered controls protect us, lessons are forgotten, and deviations from safe operating procedures can become the acceptable norm. Staff can increasingly forget to rely on sound engineering principles and other controls and instead start imagining how they think things have been done historically. The time to be most afraid is when we forget to be afraid. Systems and controls can deteriorate and several factors can coincide in the worst possible way to cause a disaster, so we must constantly be on our guard.

What You Need to Know

Welcome to Process Safety:

Process safety involves a disciplined framework for managing the integrity of operating systems and processes which handle hazardous substances. It is achieved by applying good design principles, engineering and operating and maintenance practices. It deals with prevention and control of events that have the

Know about Asset Integrity:

Asset Integrity is the ability of the asset to perform its required function effectively and efficiently whilst safeguarding life and environment. It is related to the prevention of major incidents and is an outcome of good design, construction and operating practice which is only achieved when facilities

What is a major accident :

A Major Accident is an incident that has resulted in a fatality or serious damage, possibly beyond the asset itself. These are typically initiated by a hazardous material release, but may also result from a major structural failure or loss of stability that causes serious damage to the asset.

potential to release hazardous material and

are structurally and mechanically sound.

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HSE Advice Note

Asset Integrity and Process Safety Management (AI-PSM) are crucial for a sustainable future for PDO. We are trusted to manage the risk in the oil and gas industry, one that involves operating processes of flammable materials at high temperatures and pressures.
When something goes wrong, it can go very wrong. Fortunately, we are able to work with these materials safely. We do this by establishing and maintaining barriers that act as a control against identified hazards. These barriers reduce the likelihood of incidents occurring.

Barriers control risks which protect us, our neighbours, our assets, our production and the environment. There are two kinds of barriers: **critical equipment barriers** and **critical human barriers**. Sometimes these barriers work in combination to prevent disaster. To create and maintain safe processes, our actions and decisions are often as important as the equipment safeguards.

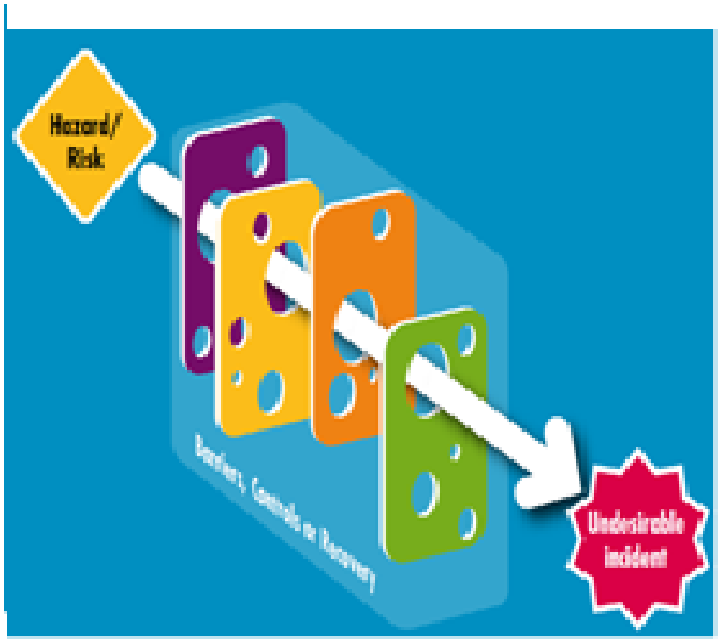
Consider the pressure in a vessel. It is controlled by the control system equipment and monitored by an operator.
If the control system does not manage the pressure, an alarm activates. The alarm should trigger a response by the operator to address the condition (human barrier). In some cases, the equipment may protect itself by shutting down automatically (equipment barrier).

We can think of these barriers as walls. Any deviation from procedures, any unaddressed alarm or overdue inspection creates a hole in the wall; a small hole, perhaps but create enough holes in enough walls and the barriers fail, which can lead to disaster. Barriers may fail over a period of time with only the last barrier failing shortly before the immediate incident. But the first barriers may have failed months or even years earlier without being noticed, paving the way for trouble ahead.

Our goal is to minimise risks in our operations which takes the commitment of each of us, from process design through engineering, operations and maintenance and all the roles that support these functions.

Think about the equipment barriers that you work with and the procedures that create human barriers against an incident. Ask yourself:

- Do I know the risks that could exist in my areas of the plant?
- Do I understand the barriers that we rely on to manage these risks?
- Do I see any problems with the barriers?
- What is my role in creating and maintaining these barriers?
- If you are unsure of the answers or have questions, take action. Talk with your supervisor or a safety professional.


Hazard/
Risk
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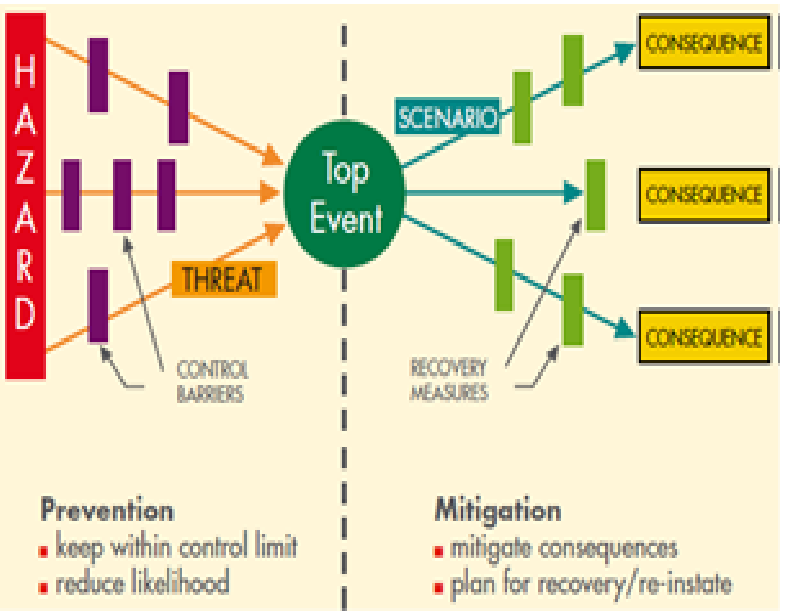
HAZARD
Top
Event
THREAT
SCENARIO
CONSEQUENCE
CONSEQUENCE
CONSEQUENCE
CONTROL
BARRIERS
RECOVERY
MEASURES
Prevention
keep within control limit
reduce likelihood
Mitigation
mitigate consequences
plan for recovery/re-instate