



# LEARNING FROM INCIDENTS ACTION ALERT

## Working in Hazardous Areas

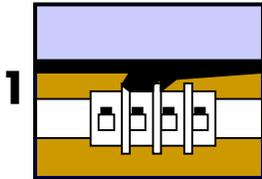
EP/AA/2009/04-02

Exploration and Production

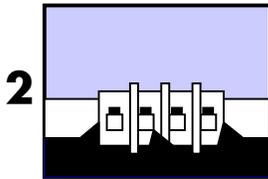
Fountain #314488

Apr 2009

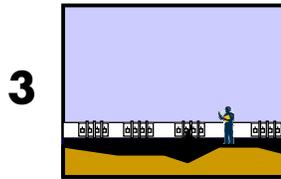
### What Happened?



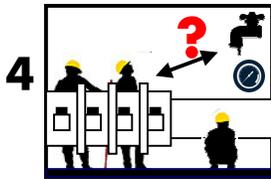
1 Oil reported seeping out along Right of Way of a crude oil and condensate trunk line at a site previously clamped.



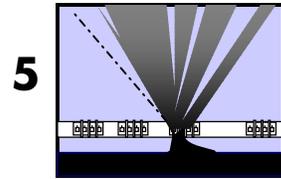
2 Access to site was achieved after 6 days and the buried pipeline exposed.



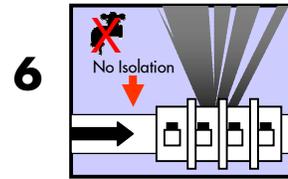
3 Source of leak confirmed to be a pipeline clamp (1 of 4 in the immediate area) installed on pipeline as a result of previous oil theft activities.



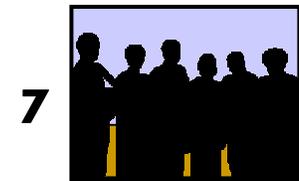
4 Initial repair efforts commenced without pipeline being shut-in or de-pressurised.



5 During repair the leak got substantially larger, resulting in a loss of containment. Team withdrew from site.



6 Shutdown was initiated but was not effective as not all inflow to pipeline was stopped.



7 Local community issues prevented access to leak site for 2 days. Oil and condensate spill grew much larger.



8 Efforts to recover free phase spilled oil prior to pipeline repair restarted using two diesel driven water pumps and a swamp buggy.



9 A significant fire broke out at site. The fire was brought under control and extinguished 3 days later after full isolation was achieved.

### Lessons Re-Learned

- Failure to follow procedures and/or widespread disregard or ignorance and/or breaking of fundamental safety rules eliminates the barriers put in place for safe working.

- Systemic tolerance of bad and unsafe working practices is a failure of safety leadership and leads to disaster.

- Fundamental and unchallenged gaps in employee and contractor awareness/knowledge of the production system and its associated work site hazards dramatically increase the severity of any potential outcome.

- Contract Owners, Holders and Users must exercise their accountability to ensure/verify that all contractors (and their sub contractors) are HSE and operationally competent at all times.

- A weak and ineffectual safety intervention culture will breed complacency, an erosion of safety standards, and an unacceptable dilution of personal accountability for our Goal Zero ideals. This is frequently the last barrier to be broken before the top event occurs.

### The Outcome

- 4 personnel killed instantly
- 4 suffered significant burn injuries
- 3 of the burned subsequently died from their injuries

### Learning Pack

• This incident poses many questions and challenges for leaders, managers, contract holders, supervisors, employees and contractors in production, maintenance, HSE and Technical operations. A learning pack will be issued in the next few months to address these issues.

### Goal Zero is Possible

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### 1. Isolation Accountabilities:

Confirm that procedures clearly require single point accountability for ensuring the complete shutdown and/or positive isolation of all facilities able to feed systems under maintenance or repair (e.g. pipeline systems serving two or more production facilities) in compliance with permit to work procedures.

Shell HSE Control Framework: Permit to Work.

EP 95-0315 - Guidelines on Permit to Work /Yellow Guide PtW 2003.

**Who:** Procedure Custodians (Regional)

**By:** End Q2 2009

### 2. Operations Procedures:

Hazardous area classifications are based on normal operating conditions. Where the likelihood of hydrocarbon gas is increased then the primary assumption must be that gas is always present. Where equipment may be used in hazardous areas it must be suitably specified and rigorously maintained within specification and stringent gas detection and ignition controls must be applied (Ref IP 15/DEP).

Confirm that operations procedures cover the precautions required (procedures, and specification and use of equipment) when working in areas where there is a likelihood of hydrocarbon release due to upset conditions to ensure compliance with IP part 15

Area Classification Code for Installations Handling Flammable Fluids – IP 15  
DEP 80.00.10.11 Gen Area Classification (amendments/supplements to IP15)

**Who:** Procedure Custodians (Regional)

**By:** End Q2 2009

### 3. Life Saving Rules:

Confirm that the above procedures and requirements are communicated to staff responsible for work in areas where there is a likelihood of hydrocarbon release.



**Who:** Asset Managers

**By:** End Q2 2009