

Chevron Richmond Refinery

DATE OF EVENT: 6th Aug 2012

OUTCOME: 19 personnel engulfed in fire, no fatalities

THE CIRCUMSTANCES:

- Normal production operations – hydrocarbon leak found.

WHAT HAPPENED:

- Hydrocarbon leak from an 8" lagged pipe was observed by an operator during routine checks. This part of the system operated at 340°C.
- Stop Point 1: There was no way to locally shut off or isolate the line from the distillation tower and the supervisor did not think it warranted shutdown.



- Stop Point 2: Decision was made to remove the insulation with hand tools to expose the leak point, but this created additional leaks in the thin pipe. The released hydrocarbon was ignited and the small fire was extinguished.
- Stop Point 3: Still intent on removing the insulation, they used high pressure water to blast it off. This resulted in the pipe rupturing.

THE RESULT:

- A large vapour cloud formed and ignited, engulfing 19 personnel. 6 suffered minor injuries, no fatalities.

MAH Barriers

Inspection & Corrosion Management

- The pipework thinned due to progressive corrosion.
- Accelerated thinning had been identified 10 years earlier, but the pipework was not replaced.
- A year before the incident, wall thinning had been identified at some locations, but not all sections were inspected and the pipe was found to be fit for 5 more years of service.

Control of Work / Emergency Response

- 3 Stop the Job triggers were missed.
- No risk assessment was carried out for removing the insulation from the pipework with tools or water whilst the line was in service.
- Had the installation been shutdown at the first trigger point, the incident would likely have not occurred.

7Cs Discussion Points

- **Culture / Commitment** – If your team encountered a hydrocarbon release which cannot be isolated, what actions would your team take?
- **Control of Work** – If your team had an emergency issue, what action would they take to follow the control of work process?

