

### Isolation Integrity

#### What happened?

A worker had isolated a pressurised hydraulic fluid line, dissipating the pressure by operating the hydraulic circuit. He then proceeded to loosen a solenoid before removing. There was no release of hydraulic fluid after initially loosening the solenoid attachment and this was taken as an indication that the system was indeed depressurised.

Moments later a steady stream of hydraulic fluid escaped from the joining faces of this component releasing an oil vapour into the room. The worker was partially guarded by the large box housing the hydraulic components, however did have his upper body coated in the substance. Fire alarms were also tripped by the occurrence.

### Hydro Generation Site

#### What did we learn?

It appears an o-ring used to seal the joint, maintained the seal for a moment before succumbing to the pressure within the line. Upon investigation it was found that the valve used for isolation was faulty. The worker was repeating what was considered an accepted procedure within the plant and believed he had accurately isolated the line and proven it depressurised.

- The most effective way to prove a line is depressurised is with an in-line pressure gauge using the test-prove-test method
- A control valve should not be used as an isolation valve for any pressurised systems
- An isolation valve that looks closed, may in fact not be



- In all instances, if you cannot demonstrate that your isolations are effective before commencing work, in a manner that does not put yourself or others at risk of harm, further steps must be taken to drain or de-pressurise the entire system upstream of the isolation