

Two permits, one disaster

Five ordinary steps in the inquiry's most-probable sequence.

On 6 July 1988 fire and explosions destroyed the Piper Alpha platform in the North Sea. This briefing follows the public inquiry's most probable sequence.

BRIEFING

Five steps from a permit to a disaster

The inquiry's most probable sequence, simplified

1 DAY SHIFT

The pressure safety valve on condensate pump A is removed for maintenance. A temporary blind flange is fitted in its place. Cullen found it was not leak-tight; it was not leak-tested or pressure-tested.

2 PERMITS

The pump and pressure-safety-valve work sit on separate permits with no cross-reference. The night-shift operators did not know the valve was missing.

3 ABOUT 21:45–21:50

Pump B trips. Operators take steps to bring pump A back into service.

4 ABOUT 22:00

Condensate was released, most probably at the blind flange, and ignited. Cullen's most-probable sequence; the decisive reinstatement action was not directly witnessed.

5 ESCALATION

Firewalls built for fire, not blast, fail. The Tartan gas riser ruptures at about 22:20. 167 people lost their lives.

ONE CHECK FOR YOUR SITE

Can your night shift see, in one controlled place, every impaired safety-critical protective function, with its owner, isolation, verification and authorised handback?

Sources: Cullen inquiry (1990), Cm 1310; IChemE LPB 261 (2018). Simplified educational interpretation; not legal or engineering advice.