



Electrical Industry  
Health & Safety Group

# Shared Learning

Critical Risk: Hazardous substances



Elevated H2S levels detected

Geothermal

## What happened?

During works on the condenser fan deck, a contractor wearing a personal gas detector alarmed when it detected 30ppm (H2S)

Work was immediately stopped and an investigation by the site team was conducted to safely determine the source of the H2S.

## What did we learn?

**Hazard Identification** – Investigations found that a fan adjacent to the Non-Condensable Gas (NCGs) outlet had been switched off for a shaft overhaul. H2S is present in the NCGs.

It was previously unknown that H2S levels might increase under certain atmospheric conditions if the adjacent fan is off.

**Trained & Competent people** - The contractor conducting the work did all the right things. Their actions highlighted the importance of having all personnel trained in the use of personal gas detectors on geothermal sites, and more importantly, to take all alarms seriously.

### Preventative Action:

The proposed solution, to highlight the potential for higher H2S levels when the adjacent fan is off, is to illustrate this on the HMI (Human Machine Interface). The fans adjacent to the NCG will also be added to the confined space register.